	INSTRUCTION FOR FILE	LING UP THE FORM-S	a ₁ (Detail of	production and Energy Con	sumption)
Sr No	Details	Note	Frequency of record	Primary Documents from where the information can be sourced and to be kept ready for verification by Accredited Energy Auditor	be sourced and to be kept ready for verification by Accredited Energy Auditor
	It is mandatory to fill data in			ex CPP, Annex Addl Eqp List-Env, Annex Project Activitie	s List
		Please fill the data as per color	ur coding provided at the	e bottom of Form Sa1	
Α	Production and capacity utilization details				
A1	Refinery Process				
i	Please provide total annual Production Capacity of Hydrate Alumina in tonnes	Capacity of all Precipitar Tank	Annual		Equipment/Section wise capacity document from OEM Capacity calculation document submitted for Environmental Consent
ii	Please provide total annual Production Capacity of Calcined Alumina in tonnes	Capacity of Calciner	Annual	OEM Document of Section-wise Process line 2) Enviromental Consent to establish/operate document	Equipment/Section wise capacity document from OEM Capacity calculation document submitted for Environmental Consent
iii	Please provide total annual Hydrate Alumina Production (including the exported hydrate alumina) in Tonnes	Production of Hydrate Alumina from all Precipitor Tank	Continuous, Hourly, Daily, Monthly	1) Log Sheet 2) CCR SCADA Report/ Trends 3) DPR 4) MPR 5) SAP Entry in PP/SD module 6) Excise record (ER1) 7) Annual Report	1)Hydrate Alumina stock Level 2) Weighhfeeders 3) Belt Weigher 4) Solid flow meter 5) Load cells
iv	Please provide total annual Calcined Alumina Production of all calciner (including the exported calcined alumina) in Tonnes	Production of Calcined Alumina from all Calciner	Continouous, Hourly, Daily, Monthly	1) Log Sheet 2) CCR SCADA Report/ Ternds 3) DPR 4) MPR 5) SAP Entry in PP/SD module 6) Excise record (ER1) 7) Annual Report	1)Calcined Alumina stock 2) Weighhfeeders 3) Belt Weigher 4) Solid flow meter 5) Load cells
٧	Formula protected (Annual production of Hydrate Alumina/ Annual production capacity of Hydrate Alumina)				
vi	Formula protected (Annual production of calcined Alummina/annual production capacity of Calcined Alumina)				
A2	Smelter Process				
i	Please provide total annual Production Capacity of Molten Aluminium in tonnes	Capacity of all Potline	Annual	OEM Document of potline Enviromental Consent to establish/operate document	Potline wise capacity document from OEM 2) Capacity calculation document submitted for Environmental Consent
ii	Please provide total annual Production Capacity of cast House in tonnes	Capacity of cast House	Annual	OEM Document of Section-wise Process line 2) Enviromental Consent to establish/operate document	Equipment/Section wise capacity document from OEM Capacity calculation document submitted for Environmental Consent
iii	Please provide total annual Molten Aluminium Production in Tonnes	Production of Molten Aluminium from all Potline	Continuous, Hourly, Daily, Monthly	1) Log Sheet 2) CCR SCADA Report/ Ternds 3) DPR 4) MPR 5) SAP Entry in PP/SD module 6) Excise record (ER1) 7) Annual Report	1) Laddle weighing system 2) Weight of Molten Aluminium
iv	Please provide total annual cast house Production in Tonnes	production of Casted product from Cast House	Continuous, Hourly, Daily, Monthly	Log Sheet 2) CCR SCADA Report/ Ternds 3) DPR 4) MPR 5) SAP Entry in PP/SD module 6) Excise record (ER1) 7) Annual Report	1) Cast House Products stock register 2) Weigh Bridge
v	Formula protected (Annual production of Molten Aluminium/ Annual production capacity of Molten Aluminium)				
vi	Formula protected (Annual production of Cast House/annual production capacity of Cast House)				
A3	Process wise production and performance detail				
A3.1	Refinery Process				
а	Hydrate Alumina				
į	Please provide the Hydrate Alumina, exported outside plant boundary or sold to any other entity in Tonnes.		Monthly, Yearly	Inventory Report 2) Excise Document (ER1)3) Stores Entry 4) SAP Entry in MM/PP/SD module	1) Weigh Bridge 2) Stock Register
ii	Please provide the Hydrate Alumina, imported from outside plant boundary or import from any other entity in Tonnes.		Monthly, Yearly	1) Inventory Report 2) Excise Document (ER1)3) Stores Entry 4) SAP Entry in MM/PP/SD module	1) Weigh Bridge 2) Stock Register
iii	Please provide opening stock of hydrate alumina in tonnes	Record Opening and Closing stock on daily basis	Daily, Monthly, Yearly	1) Inventory Report 2) Excise Document (ER1)3) Stores Entry 4) SAP Entry in MM/PP/SD module	

			la ::	14)	
iv	Please provide closing stock of hydrate alumina in tonnes	Record Opening and Closing stock on daily basis	Daily, Monthly, Yearly	Inventory Report 2) Excise Document (ER1)3) Stores Entry 4) SAP Entry in MM/PP/SD module	
v	Please provide thermal SEC of hydrate alumina (total thermal energy consumed for production of hydrate alumina in kcal /total hydrate alumina production in tonne)	The energy consumed upto making hydrate Alumina needs to be divided by total hydrate production	Daily, Monthly, Yearly	DPR 2) MPR 3) Stocks register 4) Log Book 4) Annual Report 6) Fuel test Certificate (Internal and External) 7) Excise Record	Doperator Shift Register 2) Weighfeeder Reading for fuel feeding 3) Weigher Reading
vi	Please provide electrical SEC of hydrate alumina (total electrical energy consumed for production of hydrate alumina in kWh/total hydrate alumina production in tonne)		Daily, Monthly, Yearly	1) DPR 2) MPR 3) Stocks register 4) Log Book 4) Annual Report 6)Daily Power Report 7) Monthly Power Report 8) Excise Record	1)Operator Shift Register 2) Weighfeeder Reading for fuel feeding 3) Weigher Reading 4) Energy Meter Reading 5) Energy Management System
vii	Please provide total annual running Hours of plant for producing Hydrate Alumina		Daily, Monthly, Yearly	1) DPR 2) MPR 3) DCS/CCR Trend	1) houer Meter Reading
b	Digestion Process Parameter				
i	Please provide Type of Digestion Technology used in plant			1) OEM document	1) Name Plate Details
ii	Please provide Number of Digestion Units within the plant			1) CCR/DCS SCADA Screen Shots	
iii	Please provide total annual Production Capacity of Digestion Units in tonne			1) OEM document	1) Name Plate Details
iv	Please provide Digestion Specific Steam Consumption (total steam consumed in tonne/total alumina production in tonne)		Daily, Monthly, Yearly	DPR 2) MPR 3) CCR/DCS SCADA Trends 4) Log Book S)Stock Register 6) Stores Receipt	1) Steam flow Meter 2) Shift Register
v	Please provide Digestion Specific Power Consumption (total power consumed kWh/total alumina production in tonne)		Daily, Monthly, Yearly	DPR 2) MPR 3) CCR/DCS SCADA Trends 4) Log Book S)Stock Register 6) Stores Receipt 7) Daily Power Report 8) Monthly Power Report	1) Energy Meter 2) Energy Management System
vi	Please provide Temperature of Low Temperature Digestion Units in oC		Daily, Monthly, Yearly	1) SCADA Screen Shots 2) OEM Document 3) Log Book	1) RTDs 2) Temperature Meters
vii	Please provide Pressure of Low Temperature Digestion Units in kg/cm ²		Daily, Monthly, Yearly	1) SCADA Screen Shots 2) OEM Document 3) Log Book	1) RTDs 2) Pressure Meters
viii	Please provide the temperature of High Temperature Digestion Units in oC		Daily, Monthly, Yearly	1) SCADA Screen Shots 2) OEM Document 3) Log Book	1) RTDs 2) Temperature Meters
ix	Please provide pressure of High Temperature Digestion Units in kg/cm2		Daily, Monthly, Yearly	1) SCADA Screen Shots 2) OEM Document 3) Log Book	1) RTDs 2) Pressure Meters
х	Please provide LP Steam Temperature in oC		Daily, Monthly, Yearly	1) SCADA Screen Shots 2) OEM Document 3) Log Book	1) RTDs 2) Temperature Meters
xi	Please provide LP steam Pressure in kg/cm2		Daily, Monthly, Yearly	1) SCADA Screen Shots 2) OEM Document 3) Log Book	1) RTDs 2) Pressure Meters
xii	Please provide LP Steam Enthalpy in kcal/kg		Daily, Monthly, Yearly	1) Steam Table 2) Steam Chart	
xiii	Please provide LP Steam Consumption in Tonne		Daily, Monthly, Yearly	1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4) SCADA Trends	1) Steam flow Meter 2) Shift Register
xiv	Please provide MP Steam Temperature in oC		Daily, Monthly, Yearly	1) SCADA Screen Shots 2) OEM Document 3) Log Book	1) RTDs 2) Temperature Meters
xv	Please provide MP steam Pressure in kg/cm2		Daily, Monthly, Yearly	1) SCADA Screen Shots 2) OEM Document 3) Log Book	1) RTDs 2) Pressure Meters
xvi	Please provide MP Steam Enthalpy in kcal/kg		Daily, Monthly, Yearly	1) Steam Table 2) Steam Chart	
xvii	Please provide MP Steam Consumption in Tonne		Daily, Monthly, Yearly	1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4) SCADA Trends	1) Steam flow Meter 2) Shift Register
xviii	Please provide HP Steam Temperature in oC		Daily, Monthly, Yearly	1) SCADA Screen Shots 2) OEM Document 3) Log Book	1) RTDs 2) Temperature Meters
xix	Please provide HP steam Pressure in kg/cm2		Daily, Monthly, Yearly	1) SCADA Screen Shots 2) OEM Document 3) Log Book	1) RTDs 2) Pressure Meters
xx	Please provide HP Steam Enthalpy in kcal/kg		Daily, Monthly, Yearly	1) Steam Table 2) Steam Chart	
xxi	Please provide HP Steam Consumption in Tonne		Daily, Monthly, Yearly	1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4) SCADA Trends	1) Steam flow Meter 2) Shift Register

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xxii	Please provide Specific Steam Consumption for Evaporation (total steam consumed in tonne/total alumina production in tonne)		Daily, Monthly, Yearly	Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4) SCADA Trends	1) Steam flow Meter 2) Shift Register
xxiii	Please provide Specific Power Consumption for Evaporation (total power consumed in kWh/total alumina production in tonne)		Daily, Monthly, Yearly	1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4) SCADA Trends 5) Daily Power Report	Energy Meter 2) Shift Register 3) Energy Management System
xxiv	Formula protected Weighted average of Enthalpy				
С	Calcined Alumina				
i	Please provide Opening stock of Calcined alumina in tonne for Integrated Process Only	Record Opening and Closing stock on daily basis	Daily, Monthly	Inventory Report 2) Excise Document (ER1)3) Stores Entry 4) SAP Entry in MM/PP/SD module	1) Field Inventory
ii	Please provide Closing stock of Calcined alumina in tonne for Integrated Process only	Record Opening and Closing stock on daily basis	Daily, Monthly	Inventory Report 2) Excise Document (ER1)3) Stores Entry 4) SAP Entry in MM/PP/SD module	1) Field Inventory
iii	Please provide type of Calciner Technology used within plant			1) OEM document	1) Name Plate Details
iv	Please provide calcination Temperature in °C			1) SCADA Screen Shots 2) OEM Document 3) Log Book	1) RTDs 2) Temperature Meters
٧	Please provide Specific Power Consumption for calciner (total electrical consumed in kWh/total alumina production in tonne)	Required per ton of product for calciner section	Daily, Monthly, Annually	1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4) SCADA Trends 5) Daily Power Report	Energy Meter 2) Shift Register 3) Energy Management System
vi	Please provide specific Thermal Consumption for calciner (total thermal energy consumed in kcal/total alumina production in tonne)	Required per ton of product for calciner section	Daily, Monthly, Annually	1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4) SCADA Trends	1) Shift Register 2) Field Inventory
vii	Please provide toal annual running Hours of all calciners		Daily, Monthly, Annually	1) DPR 2) MPR 3) DCS/CCR Trend	1) houer Meter Reading
viii	Please provide total calcined Alumina exported (only for Intergated Process) in tonne		Daily, Monthly, Annually	Inventory Report 2) Excise Document (ER1)3) Stores Entry 4) SAP Entry in MM/PP/SD module	1) Weigh Bridge 2) Stock Register
ix	Please provide total calcined Alumina Imported (only for Intergated Process) in tonne		Daily, Monthly, Annually	Inventory Report 2) Excise Document (ER1)3) Stores Entry 4) SAP Entry in MM/PP/SD module	1) Weigh Bridge 2) Stock Register
х	Please provide Specific Thermal Energy Consumption of Calcined Alumina (total Thermal energy consumed in kCal/total calcined alumina production in tonne)	Required per ton of product up to making Calcined Alumina	Daily, Monthly, Annually	1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4) SCADA Trends	Shift Register 2) Field Inventory 3) Section wise Thermal Energy Consumption
xi	Please provide Specific Electrical Energy Consumption of Calcined Alumina (total electrical energy consumed in kWh/total calcined alumina production in tonne)	Required per ton of product up to making Calcined Alumina	Daily, Monthly, Annually	1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4) SCADA Trends 5) Daily Power Report	Energy Meter 2) Shift Register 3) Energy Management System 4) Section wise Power consumption
d/e/f	Special Hydrate Course/Microfined/Milled				
i	Please provide total annual production capacity of Special hydrate Course/Microfined/Milled in tonne		Daily, Monthly, Annually	· ·	Equipment/Section wise capacity document from OEM Capacity calculation document submitted for Environmental Consent
ii	Please provide total annual production of special hydrate Course/Microfined/Milled in tonne		Daily, Monthly, Annually	Log Sheet 2) CCR SCADA Report/ Trends 3) DPR 4) MPR 5) SAP Entry in PP/SD module 6) Excise record (ER1) 7) Annual Report	1)Hydrate Alumina stock Level 2) Weighhfeeders 3) Belt Weigher 4) Solid flow meter 5) Load cells
iii	Please provide Thermal Specific Energy Consumption of special hydrate Course/Microfined/Milled (total thermal energy consumed in kcal/total special grade hydrate alumina production in tonne)		Daily, Monthly, Annually	1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4) SCADA Trends 5) Excise Document 6) Energy Totaliser 7) Fuel Stock Register 8) Stores Finshed Product Stock Register	Shift Register 2) Field Inventory 3) Section wise Thermal Energy Consumption 4) Solid flow Meter 5) Liquid Flow Meter 6) Steam Flow Meter 7) Weigh Bridge
iv	Please provide Electrical Specific Energy Consumption of spcial hydrate Course/Microfined/Milled (total electrical energy consumed in kwh/total special grade hydrate alumina production in tonne)		Daily, Monthly, Annually	Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4) SCADA Trends 5) Excise Document 6) Energy Totaliser 7) Daily Power Report 8) Monthly Power Report 9) Stores Finshed Product Stock Register	Energy Meter 2) Shift Register 3) Energy Management System 4) Section wise Power consumption
g/h/i	Special Alumina Course/Microfined/Milled				
i	Please provide total annual production capacity of Special Alumina Course/Microfined/Milled in tonne		Daily, Monthly, Annually	OEM Document of Section-wise Process line 2) Enviromental Consent to establish/operate document	Equipment/Section wise capacity document from OEM Capacity calculation document submitted for Environmental Consent
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	Please provide total annual production of special Alumina	Daily, Monthly,	1) Log Sheet 2) CCR SCADA Report/ Trends 3) DPR 4)	1) stock Level 2) Weighhfeeders 3) Belt Weigher 4) Solid
ii		Annually	MPR 5) SAP Entry in PP/SD module 6) Excise record	flow meter 5) Load cells
	Course/Microfined/Milled in tonne		(ER1) 7) Annual Report	
		Daily, Monthly,	1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4)	1) Shift Register 2) Field Inventory 3) Section wise Thermal
	please provide Thermal Specific Energy Consumption of special	Annually	SCADA Trends 5) Excise Document 6) Energy Totaliser	Energy Consumption 4) Solid flow Meter 5) Liquid Flow
iii	Alumina Course/Microfined/Milled (total thermal energy consumed in	Ailliually	1	
	kcal/total special alumina production in tonne)		7) Fuel Stock Register 8) Stores Finshed Product Stock	Meter 6) Steam Flow Meter 7) Weigh Bridge
	.,		Register	
		Daily, Monthly,	1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4)	1) Energy Meter 2) Shift Register 3) Energy Management
	Please provide Electrical Specific Energy Consumption of spcial Alumina	Annually	SCADA Trends 5) Excise Document 6) Energy Totaliser	System 4) Section wise Power consumption
iv	Course/Microfined/Milled (total electrical energy consumed in		7) Daily Power Report 8) Monthly Power Report 9)	
	kwh/total special alumina production in tonne)		Stores Finshed Product Stock Register	
	,,		Stores i manea i roddet stock negater	
i	Carbon Black Production			
		Daily, Monthly,	1) OEM Document of Section-wise Process line 2)	1) Equipment/Section wise capacity document from OEM
i	Please provide total annual production capacity of carbon black in	Annually	Environmental Consent to establish/operate document	Capacity calculation document submitted for
	tonne	, amadany	Environmental consent to establish, operate accument	Enviromental Consent
		Daily, Monthly,	1) Log Sheet 2) CCR SCADA Report/ Trends 3) DPR 4)	1) stock Level 2) Weighhfeeders 3) Belt Weigher 4) Solid
l ii	Please provide total approach production of course block in the re-			
11	Please provide total annual production of carbon black in tonne	Annually	MPR 5) SAP Entry in PP/SD module 6) Excise record	flow meter 5) Load cells
			(ER1) 7) Annual Report	
	please provide Thermal Specific Energy Consumption of carbon black	Daily, Monthly,	1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4)	1) Shift Register 2) Field Inventory 3) Section wise Thermal
iii		Annually	SCADA Trends 5) Excise Document 6) Energy Totaliser	Energy Consumption 4) Solid flow Meter 5) Liquid Flow
III	(total thermal energy consumed in kcal/total carbon black production		7) Fuel Stock Register 8) Stores Finshed Product Stock	Meter 6) Steam Flow Meter 7) Weigh Bridge
	in tonne)		Register	, ,
		Daily, Monthly,	1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4)	1) Energy Meter 2) Shift Register 3) Energy Management
	Please provide Electrical Specific Energy Consumption of carbon black	Annually	SCADA Trends 5) Excise Document 6) Energy Totaliser	System 4) Section wise Power consumption
	_ · · · · · · · · · · · · · · · · · · ·	Ailliudily	, , ,	System 4/ Section wise rower consumption
iv	(total electrica energy consumed in kwh/total carbon black production		7) Daily Power Report 8) Monthly Power Report 9)	
	in tonne)		Stores Finshed Product Stock Register	
k	Carbon Paste Production	Daily, Monthly,	OEM Document of Section-wise Process line 2)	Equipment/Section wise capacity document from OEM
i	Please provide total annual production capacity of carbon paste in		1 7	
'	tonne	Annually	Environmental Consent to establish/operate document	2) Capacity calculation document submitted for
				Enviromental Consent
		Daily, Monthly,	1) Log Sheet 2) CCR SCADA Report/ Trends 3) DPR 4)	1) stock Level 2) Weighhfeeders 3) Belt Weigher 4) Solid
ii	Please provide total annual production of carbon paste in tonne	Annually	MPR 5) SAP Entry in PP/SD module 6) Excise record	flow meter 5) Load cells
			(ER1) 7) Annual Report	
	1 1 1 10 10 5	Daily, Monthly,	1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4)	1) Shift Register 2) Field Inventory 3) Section wise Thermal
	please provide Thermal Specific Energy Consumption of carbon paste	Annually	SCADA Trends 5) Excise Document 6) Energy Totaliser	Energy Consumption 4) Solid flow Meter 5) Liquid Flow
iii	(total thermal energy consumed in kcal/total carbon paste production	, wany	7) Fuel Stock Register 8) Stores Finshed Product Stock	Meter 6) Steam Flow Meter 7) Weigh Bridge
	in tonne)		1	wieter of steam flow wieter // weigh bridge
		5 11 14 11 1	Register	4) 5 44 4 9) 5) 10 9 4 4 7 7 7
		Daily, Monthly,	1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4)	1) Energy Meter 2) Shift Register 3) Energy Management
	Please provide Electrical Specific Energy Consumption of carbon paste	Annually	SCADA Trends 5) Excise Document 6) Energy Totaliser	System 4) Section wise Power consumption
iv	(total electrica energy consumed in kwh/total carbon paste production		7) Daily Power Report 8) Monthly Power Report 9)	
	in tonne)		Stores Finshed Product Stock Register	
1	Zeolite Production			
		Daily, Monthly,	1) OEM Document of Section-wise Process line 2)	Equipment/Section wise capacity document from OEM
i	Please provide total annual production capacity of zeolite in tonne	Annually	Enviromental Consent to establish/operate document	Capacity calculation document submitted for
				Enviromental Consent
		Daily, Monthly,	1) Log Sheet 2) CCR SCADA Report/ Trends 3) DPR 4)	1) stock Level 2) Weighhfeeders 3) Belt Weigher 4) Solid
ii	Please provide total annual production of zeolite in tonne	Annually	MPR 5) SAP Entry in PP/SD module 6) Excise record	flow meter 5) Load cells
"	rease provide total annual production of zeolite in toffile	Ailliudily	(ER1) 7) Annual Report	now meter of Load cens
		Dath Manalah		A) Chift Desister 2) Field Inventors 2) Cention 1 7
		Daily, Monthly,	1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4)	1) Shift Register 2) Field Inventory 3) Section wise Thermal
iii	please provide Thermal Specific Energy Consumption of zeolite (total	Annually	SCADA Trends 5) Excise Document 6) Energy Totaliser	Energy Consumption 4) Solid flow Meter 5) Liquid Flow
	thermal energy consumed in kcal/total zeolite production in tonne)		7) Fuel Stock Register 8) Stores Finshed Product Stock	Meter 6) Steam Flow Meter 7) Weigh Bridge
			Register	

Please provide Electrical Specific Energy Consumption of zeolite (total electrical emergy consumed in kwift/total zeolite production in tonne) Other Production -1 I Please provide total annual production capacity of Product -1 in tonne Daily, Monthly, Annually Please provide total annual production of Product -1 in tonne Daily, Monthly, Annually Please provide total annual production of Product -1 in tonne Daily, Monthly, Annually Please provide total annual production of Product -1 in tonne Daily, Monthly, Annually Please provide Electrical Specific Energy Consumption of Product -1 in tonne Daily, Monthly, Annually Please provide Electrical Specific Energy Consumption of Product -1 in tonne Daily, Monthly, Annually Please provide Electrical Specific Energy Consumption of Product -1 in tonne Please provide Electrical Specific Energy Consumption of Product -1 in tonne Please provide Electrical Specific Energy Consumption of Product -1 in tonne Please provide Electrical Specific Energy Consumption of Product -1 in tonne Please provide Electrical Specific Energy Consumption of Product -1 in tonne Please provide Electrical Specific Energy Consumption of Product -1 in tonne Please provide Electrical Specific Energy Consumption of Product -1 in tonne Please provide Equipment Specific Energy Consumption of Product -1 in tonne Please provide Equipment Specific Energy Consumption of Product -1 in tonne Please provide Equipment Specific Energy Consumption of Product -1 in tonne Energy Consum				Dath. Manadah.	4) L =	4) 5 M-4 2) Chift Di-t 2) 5 M
Resea Provide total annual production capacity of Product -1 in tonne Daily, Monthly, Annually Daily, Monthly, Daily,	iv			Daily, Monthly, Annually	7) Daily Power Report 8) Monthly Power Report 9)	Energy Meter 2) Shift Register 3) Energy Management System 4) Section wise Power consumption
Please provide total annual production capacity of Product -1 in tonne Daily, Monthly, Annually 3 (DK Document of Section-wise Process Ine 2) 1 (Supment/Section wise capacity do Manually 1 (Section Product -1 in tonne Daily, Monthly, Annually 1 (Section Product -1 in tonne Daily, Monthly, Annually 1 (Section Product -1 in tonne Daily, Monthly, Annually 1 (Section Product -1 in tonne Daily, Monthly, Annually 1 (Section Product -1 in tonne Daily, Monthly, Annually 1 (Section Product -1 in tonne Daily, Monthly, Annually 1 (Section Product -1 in tonne Daily, Monthly, Annually 1 (Section Product -1 in tonne Daily, Monthly, Annually 1 (Section Product -1 in tonne Daily, Monthly, Annually 1 (Section Product -1 in tonne Daily, Monthly, Annually 1 (Section Product -1 in tonne Daily, Monthly, Annually 1 (Section Product -1 in tonne Daily, Monthly, Annually 1 (Section Product -1 in tonne Daily, Monthly, Annually 1 (Section Product 1 (Section Product -1 in tonne Daily, Monthly, Annually 1 (Section Product 1	m	Other Production -1				
Please provide total annual production capacity of Product -1 in tonne Daily, Monthly, Annually 3 (DKA Document of Section-wase Process line 2) 1 (Suprement Section wase provided counted to Capacity activation document submitted in the product of Product -1 in tonne Daily, Monthly, Annually 3 (Log Sheet 2) CCR SCADA Report/ Trends 3) DPR 4) 3 (Specific product) 3 (Specifi	i					
Please provide total annual production of Product - 1 in tonne Annually MRR is SAP Entry in PP/SD module © Excise record flow meter 51 load cells Please provide the thermal segret consumed in kral/total Product - 1 production in tonne Daily, Monthly, Annually	ii					Equipment/Section wise capacity document from OEM 2) Capacity calculation document submitted for Environmental Consent
Please provide Electrical Specific Energy Consumption of Product -1 production in tonnel) National Product Product Claimer Product Product -1 production in tonnel	iii	Please provide total annual production of Product - 1 in tonne			MPR 5) SAP Entry in PP/SD module 6) Excise record	1) stock Level 2) Weighhfeeders 3) Belt Weigher 4) Solid flow meter 5) Load cells
Please provide Electrical Specific Energy Consumption of Product 1 total electrica energy consumed in kwh/total Product 1 production in tonnels National Product Electrical Energy Consumption of Product 1 production in tonnels National Product (Ealciner/Major product) section start/stop Please provide Equivalent major Production during Cold Start per annum in Tonnes National Energy Product Stock Register	iv	(total thermal energy consumed in kcal/total Product -1 production in			SCADA Trends 5) Excise Document 6) Energy Totaliser 7) Fuel Stock Register 8) Stores Finshed Product Stock	1) Shift Register 2) Field Inventory 3) Section wise Thermal Energy Consumption 4) Solid flow Meter 5) Liquid Flow Meter 6) Steam Flow Meter 7) Weigh Bridge
Please provide Equivalent major Production during Cold Start per annum in Tonnes Continuous, Hourly, Daily, Monthly	٧	(total electrica energy consumed in kwh/total Product -1 production in			SCADA Trends 5) Excise Document 6) Energy Totaliser 7) Daily Power Report 8) Monthly Power Report 9)	Energy Meter 2) Shift Register 3) Energy Management System 4) Section wise Power consumption
i Please provide Edurwalent major Production during Cold Start per annum in Tonnes SEC shall be provided up to calcination Please provide Calciner Operating Thermal SEC (Up to section product) in kcal/kg equivalent major product Nexal/kg equivalent major product Continuous, Hourly, Daily, Monthly Please provide Calciner Operating Electrical SEC (Up to section product) Please provide Calciner Operating Electrical SEC (Up to section product) Please provide Calciner Operating Electrical SEC (Up to section product) Please provide Calciner Operating Electrical SEC (Up to section product) Please provide Calciner Operating Electrical SEC (Up to section product) Please provide Calciner Operating Electrical SEC (Up to section product) Please provide the annual run hours of Calciner in Hours Grid, Raw material unavailability. Natural Disaster, Rioting or Social unrest, Major change in government policy by Information and program of the product Stock Register or Daily, Monthly Please provide total nos of Calciner Hot to Cold stop due to external factor annually Please provide the Electrical Energy Consumption during Calciner Hot to Cold stop due to external factor annually Please provide the annual hours for startup in Calciner Cold to Hot start due to external factors Please provide to annual hours for startup in Calciner Cold to Hot start due to external factors Please provide total nos of Calciner Cold to Hot start due to external factors Please provide to the annual hours for startup in Calciner Cold to Hot start due to external factors Please provide total nos of Calciner Cold to Hot start due to external factors Please provide to the annual hours for startup in Calciner Cold to Hot start due to external factors Please provide total nos of Calciner Cold to Hot start due to external factors Please provide total nos of Calciner Cold to Hot start due to external factors Please provide total nos of Calciner Cold to Hot start due to external factors Please provide total nos of Calciner Cold to Hot	n	Major Product (Calciner/Major product) section start/stop				
Please provide Calciner Operating Thermal SEC (Up to section product) Please provide Calciner Operating Electrical SEC (Up to section product) Please provide Calciner Operating Electrical SEC (Up to section product) Please provide Calciner Operating Electrical SEC (Up to section product)	i				MPR 5) SAP Entry in PP/SD module 6) Excise record	1)Major Product stock Level 2) Weighhfeeders 3) Belt Weigher 4) Solid flow meter 5) Load cells
Please provide Calciner Operating Electrical SEC (Up to section product) kWh/t equivalent major product Please provide the annual run hours of Calciner in Hours	ii		SEC shall be provided up to calcination		SCADA Trends 5) Excise Document 6) Energy Totaliser 7) Fuel Stock Register 8) Stores Finshed Product Stock	1) Shift Register 2) Field Inventory 3) Section wise Thermal Energy Consumption 4) Solid flow Meter 5) Liquid Flow Meter 6) Steam Flow Meter 7) Weigh Bridge
Failure (Where CPP is not Sync with Grid), Raw material unavailability, Natural Disaster, Rioting or Social unrest, Major change in government policy hampering plant's process system, Any unforeseen circumstances not controlled by plant management Please provide the Electrical Energy Consumption during Calciner Hot to Cold stop due to external factor Please provide the annual hours for startup in Calciner Cold to Hot start due to external factors Please provide total nos of Calciner Cold to Hot start due to external factors Failure (Where CPP is not Sync with Grid), Raw material unavailability, Natural Disaster, Rioting or Social unrest, Major change in government policy hampering plant's process system, Any unforeseen circumstances not controlled by plant management Failure (Where CPP is not Sync with Grid), Raw material unavailability, Natural Disaster, Rioting or Social unrest, Major change in government policy hampering plant's process system, Any unforeseen circumstances not controlled by plant management Continuous, Hourly, Daily, Monthly Trends Continuous, Hourly, Daily, Monthly Trends 1) Log sheet 2) DPR 3) MPR 4) Refer Sr. No: P 5) SCADA 1) Shift operator's Log Register 2) Bread Energy Management System Continuous, Hourly, Daily, Monthly Trends Trends 1) Log sheet 2) DPR 3) MPR 4) Refer Sr. No: P 5) SCADA 1) Shift operator's Log Register 2) Bread Energy Management System Continuous, Hourly, Daily, Monthly Trends Trends	iii				SCADA Trends 5) Excise Document 6) Energy Totaliser 7) Daily Power Report 8) Monthly Power Report 9)	Energy Meter 2) Shift Register 3) Energy Management System 4) Section wise Power consumption
V Please provide annual nours stoppage in Calciner (Hot to Cold stop) due to external factor Najor change in government policy hampering plant's process system, Any unforeseen circumstances not controlled by plant management Najor change in government policy hampering plant's process system, Any unforeseen circumstances not controlled by plant management Najor change in government policy hampering plant's process system, Any unforeseen circumstances not controlled by plant management Najor change in government policy hampering plant's process system, Any unforeseen circumstances not controlled by plant management Najor change in government policy hampering plant's process system, Any unforeseen circumstances not controlled by plant management Najor change in government policy hampering plant's process system, Any unforeseen circumstances not controlled by plant management Najor change in government policy hampering plant's process system, Any unforeseen circumstances not controlled by plant management Najor change in government policy hampering plant's process system, Any unforeseen circumstances not controlled by plant management Najor change in government policy hampering plant's process system, Any unforeseen circumstances not controlled by plant management Najor change in government policy hampering plant's process system, Any unforeseen circumstances not controlled by plant management Najor change in government policy hampering plant's process system, Any unforeseen circumstances not controlled by plant management Najor change in government policy hampering plant's process system, Any unforeseen circumstances not controlled by plant management Najor change in government policy in continuous, Hourly, Daily, Monthly Najor, Mont	iv	Please provide the annual run hours of Calciner in Hours	Failure (Where CPP is not Sync with			1)Shift operator's Log Register 2) Breakdown report
Please provide total nos of Calciner Hot to Cold stop due to external factor annually Please provide the Electrical Energy Consumption during Calciner Hot to Cold stop due to external factor annually Please provide the annual hours for startup in Calciner Cold to Hot start due to external factors Please provide total nos of Calciner Cold to Hot start due to external factors Please provide total nos of Calciner Hot to Cold stop due to external factor annually Please provide the annual hours for startup in Calciner Cold to Hot start due to external factors Please provide total nos of Calciner Cold to Hot start due to external factors Uniforcine not controlled by plant management Continuous, Hourly, Daily, Monthly Dail	v	· · · · · · · · · · · · · · · · · · ·	Major change in government policy			1) Shift operator's Log Register 2) Breakdown report
vii Please provide the electrical Energy Consumption during Calciner Hot to Cold stop due to external factor annually Daily, Monthly 3) DPR 4) MPR 6) CCR SCADA Trends Energy Management System Continuous, Hourly, Daily, Monthly Trends Continuous, Hourly, Daily, Monthly Trends Please provide the annual hours for startup in Calciner Cold to Hot start due to external factors Daily, Monthly 1) Log sheet 2) DPR 3) MPR 4) Refer Sr. No: P 5) SCADA 1) Shift operator's Log Register 2) Breat Continuous, Hourly, Daily, Monthly Trends Continuous, Hourly, Daily Monthly Trends	vi		unforeseen circumstances not controlled			1) Shift operator's Log Register 2) Breakdown report
viii Please provide the annual nours for startup in Calciner Cold to Hot start due to external factors Daily, Monthly Trends Continuous, Hourly, Daily Monthly Trends Trends Continuous, Hourly, Daily Monthly Trends	vii					Shift operator's Log Register 2) Breakdown report 3) Energy Management System
Please provide total nos of Calciner Cold to Hot start due to external Daily Monthly Trends	viii					1) Shift operator's Log Register 2) Breakdown report
	ix					1) Shift operator's Log Register 2) Breakdown report

x	Please provide the Electrical Energy Consumption in Lakh kWh during Calciner Cold to Hot start due to external factors taking production into account	The energy of the production during the cold to hot start needs to be subtracted. The same is to be done by multiplying the existing SEC up to Calciner with the production made dueting the period from the Energy consumed per startup due to external factor The energy of the production during the cold to hot start needs to be subtracted. The same is to be done by multiplying	Continuous, Hourly, Daily, Monthly Continuous, Hourly, Daily, Monthly	Energy Meter Reading for Section 2) Kiln Log sheet DPR 4) MPR 6) CCR SCADA Trends DPR 2) MPR 3) CCR SCADA Trends 4) Stores Fuel Register	Shift operator's Log Register 2) Breakdown report 3) Energy Management System 1)Shift operator's Log Register 2) Breakdown report
xi (Please provide the Thermal Energy Consumption in Million kcal during	the existing SEC up to Calciner with the production made dueting the period from the Energy consumed per startup due to external factor			
	Please provide the annual hours for startup in Calciner Cold to Hot start due to internal factors		Continuous, Hourly, Daily, Monthly	1) Log sheet 2) Shift operator's Log Register 3) DPR 4) MPR 5) Refer Sr. No: P 6) CCR Trends	1) Shift operator's Log Register 2) Breakdown report
42.2	Consider Burners				
	Smelter Process Molten Aluminum Production				
i	Please provide thermal SEC per tonne of molten Aluminium Production (total thermal Energy consumption in kcal/total molten aluminium production in tonne)		Continuous, Hourly, Daily, Monthly	1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4) SCADA Trends 5) Excise Document 6) Energy Totaliser 7) Fuel Stock Register 8) Stores Finshed Product Stock Register	Shift Register 2) Field Inventory 3) Section wise Thermal Energy Consumption 4) Solid flow Meter 5) Liquid Flow Meter 6) Steam Flow Meter 7) Weigh Bridge
ii	Please provide Electrical SEC per tonne of molten Aluminium production (total electrical energy consumption in kwh/total molten aluminium production in tonne)		Continuous, Hourly, Daily, Monthly	Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4) SCADA Trends 5) Excise Document 6) Energy Totaliser 7) Daily Power Report 8) Monthly Power Report 9) Stores Finshed Product Stock Register	Energy Meter 2) Shift Register 3) Energy Management System 4) Section wise Power consumption
iii	Please provide total Calcined Alumina Consumed within plant in tonne			1) Stores Receipt 2) Section Stock and Tranfer register 3) DPR 4) MPR	
iv	Please provide total annual running Hours of plant			1) Log sheet 2) Shift operator's Log Register 3) DPR 4) MPR 5) CCR Trends	1) Shift operator's Log Register 2) Breakdown report
b :	Smelter Process Operating Parameters				
b.1/b.2/b.3/ b.4/b.5/b.6/ b.7/b.8/b.9/ b.10	Line 1/Line 2/Line 3/Line 4/Line 5/Line 6/Line 7/Line 8/Line 9/Line 10				
	Please provide rated capacity of molten aluminium production in tonnes (Potline wise)		Yearly	1) OEM Document 2) Design Basis Report	1) Name Plate Rating
1 11 1	Please provide total Molten Aluminium Production in tonnes (Potline wise)		Continuous, Hourly, Daily, Monthly	Log Sheet 2) CCR SCADA Report/ Trends 3) DPR 4) MPR 5) SAP Entry in PP/SD module 6) Excise record (ER1) 7) Annual Report	1)Major Product stock Level 2) Weighhfeeders 3) Belt Weigher 4) Solid flow meter 5) Load cells
iii	Please provide Smelting Technology used within the plant			1) OEM documnent	1) Name Plate Details
	Please provide No of Operating Pots (NOP) Operation to be based on operating pots weighted with the time (Potline wise)		Continuous, Hourly, Daily, Monthly	1) Log Sheet 2) CCR SCADA Report/ Trends 3) DPR 4) MPR 5) SAP Entry in PP/SD module 6) Excise record (ER1) 7) SCDA Screen Shot	1) Shift Register
V	Please provide No of Pots/Potline (NOPP)		Yearly	1) OEM Document 2) Design Basis Report	1) Name Plate Rating
vi	Please provide Dead pot voltage (DPV) in volts			1) Log Sheet 2) Shift Register 3) SCADA Screen Shots	
vii	Please provide Design Pot Voltage (DnPV) in volts			1) OEM Document 2) Design Basis Report	1) Name Plate Rating

		T	1	1) OFM Decument 2) Decign Basic Benert	1) Nama Blata Bating
viii	Please provide Design Bus Bar Voltage Drop (DnBV) in volts			1) OEM Document 2) Design Basis Report	1) Name Plate Rating
ix	Please provide Design Current Efficiency of Pots (CE) in %			1) OEM Document 2) Design Basis Report	1) Name Plate Rating
х	Please provide DC Current Design in Kilo Amps			1) OEM Document 2) Design Basis Report	1) Name Plate Rating
xi	Please provide DC Current Actual in Kilo Amps			1) Log Sheet 2) Shift Register 3) SCADA Screen Shots	
xii	Please provide Anode Effect in number of anode/Pot/Cell/day			1) Log Sheet 2) Shift Register 3) SCADA Screen Shots 4) Calculation sheet	
xiii	Please provide Design DC Specific Power Consumption of pots in kWh/Tonne			1) OEM Document 2) Design Basis Report	1) Name Plate Rating
xiv	Please provide Actual DC Specific Power Consumption of pots in kWh/Tonne			1) Log Sheet 2) Shift Register 3) SCADA Screen Shots	
xv	Please provide Alumina Consumption Factor in Tonnes of alumina consumed / Tonnes of Molten Aluminium produced			1) Log Sheet 2) Shift Register 3) SCADA Screen Shots	
xvi	Please provide Carbon Consumption Factor in Tonnes of Carbon consumed/Tonnes of Molten Aluminium produced			1) Log Sheet 2) Shift Register 3) SCADA Screen Shots 4) Calculation sheet	
С	Carbon Anodes Production				
(i)	Please provide total annual Production Capacity of carbon anodes in tonnes			1) OEM Document 2) Design Basis Report	1) Name Plate Rating
(ii)	Please provide total annual production of actual carbon anodes in tonnes			1) Log Sheet 2) CCR SCADA Report/ Trends 3) DPR 4) MPR 5) SAP Entry in PP/SD module 6) Excise record (ER1) 7) Annual Report	1)Major Product stock Level 2) Weighhfeeders 3) Belt Weigher 4) Solid flow meter 5) Load cells
(iii)	Formula protected (Annual production of carbon anodes/ Annual production capacity of carbon anodes)				
(iv)	Please provide Electrical SEC of carbon anode production (total electrical energy consumed for carbon anode production in kWh / total carbon anode production in tonne)			Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4) SCADA Trends 5) Excise Document 6) Energy Totaliser 7) Daily Power Report 8) Monthly Power Report 9) Stores Finshed Product Stock Register	Energy Meter 2) Shift Register 3) Energy Management System 4) Section wise Power consumption
(v)	Please provide Thermal SEC of carbon anode production (total thermal energy consumed for carbon anode production in kCal / total carbon anode production in tonne)			Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4) SCADA Trends 5) Excise Document 6) Energy Totaliser 7) Fuel Stock Register 8) Stores Finshed Product Stock Register	Shift Register 2) Field Inventory 3) Section wise Thermal Energy Consumption 4) Solid flow Meter 5) Liquid Flow Meter 6) Steam Flow Meter 7) Weigh Bridge
(vi)	Please provide Opening stock of carbon anode in tonne	Record Opening and Closing stock on daily basis	Daily, Monthly	1) Inventory Report 2) Excise Document (ER1)3) Stores Entry 4) SAP Entry in MM/PP/SD module	
(vii)	Please provide Closing stock of carbon anode in tonne	Record Opening and Closing stock on daily basis	Daily, Monthly	1) Inventory Report 2) Excise Document (ER1)3) Stores Entry 4) SAP Entry in MM/PP/SD module	
viii	Please provide annual total Imported Anode in tonne			Inventory Report 2) Excise Document (ER1)3) Stores Entry 4) SAP Entry in MM/PP/SD module	
ix	Please provide annual total Exported Anode in tonne			Inventory Report 2) Excise Document (ER1)3) Stores Entry 4) SAP Entry in MM/PP/SD module	
d	Cast House Production				
d.1	Billets				
(i)	Please provide total annual Production Capacity of billets in tonnes		Daily, Monthly, Annually	1) OEM Document of Section-wise Process line 2) Environmental Consent to establish/operate document	Equipment/Section wise capacity document from OEM Capacity calculation document submitted for Environmental Consent
(ii)	Please provide total annual production of billets in tonnes		Daily, Monthly, Annually	1) Log Sheet 2) CCR SCADA Report/ Trends 3) DPR 4) MPR 5) SAP Entry in PP/SD module 6) Excise record (ER1) 7) Annual Report	1) Stock Level 2) Weighhfeeders 3) Belt Weigher 4) Solid flow meter 5) Load cells
(iii)	Please provide total Thermal SEC of Billets (total annual thermal energy consumed in kcal/total annual billets production in tonne)		Daily, Monthly, Annually	1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4) SCADA Trends 5) Excise Document 6) Energy Totaliser 7) Fuel Stock Register 8) Stores Finshed Product Stock Bookstor	1) Shift Register 2) Field Inventory 3) Section wise Thermal Energy Consumption 4) Solid flow Meter 5) Liquid Flow Meter 6) Steam Flow Meter 7) Weigh Bridge
(iii)				SCADA Trends 5) Excise Document 6) Energy Totaliser	Energy Consumption 4) Solid flow Mete

(iv)	Please provide total Electrical SEC of Billtes (total annual electrical energy consumed in kWh/total annual billets production in tonnes)	ly, Monthly, nually	1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4) SCADA Trends 5) Excise Document 6) Energy Totaliser 7) Daily Power Report 8) Monthly Power Report 9) Stores Finshed Product Stock Register	Energy Meter 2) Shift Register 3) Energy Management System 4) Section wise Power consumption
d.2	Ingot			
(i)	Please provide total annual Production Capacity of Ingots in tonnes	ly, Monthly, nually	OEM Document of Section-wise Process line 2) Environmental Consent to establish/operate document	Equipment/Section wise capacity document from OEM Capacity calculation document submitted for Environmental Consent
(ii)	Please provide total annual production of Ingots in tonnes	ly, Monthly, nually	Log Sheet 2) CCR SCADA Report/ Trends 3) DPR 4) MPR 5) SAP Entry in PP/SD module 6) Excise record (ER1) 7) Annual Report	1) Stock Level 2) Weighhfeeders 3) Belt Weigher 4) Solid flow meter 5) Load cells
(iii)	Please provide total Thermal SEC of Ingots (total annual thermal energy consumed in kcal/total annual ingots production in tonne)	ly, Monthly, nually	1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4) SCADA Trends 5) Excise Document 6) Energy Totaliser 7) Fuel Stock Register 8) Stores Finshed Product Stock Register	1) Shift Register 2) Field Inventory 3) Section wise Thermal Energy Consumption 4) Solid flow Meter 5) Liquid Flow Meter 6) Steam Flow Meter 7) Weigh Bridge
(iv)	Please provide total Electrical SEC of Ingots (total annual electrical energy consumed in kwh/total annual ingots production in tonnes)	ly, Monthly, nually	1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4) SCADA Trends 5) Excise Document 6) Energy Totaliser 7) Daily Power Report 8) Monthly Power Report 9) Stores Finshed Product Stock Register	Energy Meter 2) Shift Register 3) Energy Management System 4) Section wise Power consumption
d.3	Bars			
(i)	Please provide total annual Production Capacity of bars in tonnes	ly, Monthly, nually	OEM Document of Section-wise Process line 2) Environmental Consent to establish/operate document	Equipment/Section wise capacity document from OEM Capacity calculation document submitted for Environmental Consent
(ii)	Please provide total annual production of bars in tonnes	ly, Monthly, nually	Log Sheet 2) CCR SCADA Report/ Trends 3) DPR 4) MPR 5) SAP Entry in PP/SD module 6) Excise record (ER1) 7) Annual Report	Stock Level 2) Weighhfeeders 3) Belt Weigher 4) Solid flow meter 5) Load cells
(iii)	Please provide total Thermal SEC of bars (total annual thermal energy consumed in kcal/total annual bars production in tonne)	ly, Monthly, nually	1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4) SCADA Trends 5) Excise Document 6) Energy Totaliser 7) Fuel Stock Register 8) Stores Finshed Product Stock Register	1) Shift Register 2) Field Inventory 3) Section wise Thermal Energy Consumption 4) Solid flow Meter 5) Liquid Flow Meter 6) Steam Flow Meter 7) Weigh Bridge
(iv)	Please provide total Electrical SEC of bars (total annual electrical energy consumed in kwh/total annual bars production in tonnes)	ly, Monthly, nually	Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4) SCADA Trends 5) Excise Document 6) Energy Totaliser 7) Daily Power Report 8) Monthly Power Report 9) Stores Finshed Product Stock Register	Energy Meter 2) Shift Register 3) Energy Management System 4) Section wise Power consumption
d.4	Primary Foundry Alloys			
(i)	Please provide total annual Production Capacity of Primary Foundry alloys in tonnes	ly, Monthly, nually	OEM Document of Section-wise Process line 2) Environmental Consent to establish/operate document	Equipment/Section wise capacity document from OEM Capacity calculation document submitted for Environmental Consent
(ii)	Please provide total annual production of primary foundry alloys in tonnes	ly, Monthly, nually	Log Sheet 2) CCR SCADA Report/ Trends 3) DPR 4) MPR 5) SAP Entry in PP/SD module 6) Excise record (ER1) 7) Annual Report	Stock Level 2) Weighhfeeders 3) Belt Weigher 4) Solid flow meter 5) Load cells
(iii)	Please provide total Thermal SEC of primary foundry alloys (total annual thermal energy consumed in kcal/total annual primary foundry alloys production in tonne)	ly, Monthly, nually	1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4) SCADA Trends 5) Excise Document 6) Energy Totaliser 7) Fuel Stock Register 8) Stores Finshed Product Stock Register	1) Shift Register 2) Field Inventory 3) Section wise Thermal Energy Consumption 4) Solid flow Meter 5) Liquid Flow Meter 6) Steam Flow Meter 7) Weigh Bridge
(iv)	Please provide total Electrical SEC of primary foundry alloys (total annual electrical energy consumed in kWh/total annual primary foundry alloys production in tonnes)	ly, Monthly, nually	1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4) SCADA Trends 5) Excise Document 6) Energy Totaliser 7) Daily Power Report 8) Monthly Power Report 9) Stores Finshed Product Stock Register	Energy Meter 2) Shift Register 3) Energy Management System 4) Section wise Power consumption
d.5	Wire Rod			
(i)	Please provide total annual Production Capacity of Wire Rods in tonnes	ly, Monthly, nually	OEM Document of Section-wise Process line 2) Environmental Consent to establish/operate document	Equipment/Section wise capacity document from OEM Capacity calculation document submitted for Environmental Consent

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(**)	Discourage ide to the large describes of this Parks in terms	Daily, Monthly,	1) Log Sheet 2) CCR SCADA Report/ Trends 3) DPR 4)	1) Stock Level 2) Weighhfeeders 3) Belt Weigher 4) Solid
(ii)	Please provide total annual production of wire Rods in tonnes	Annually	MPR 5) SAP Entry in PP/SD module 6) Excise record	flow meter 5) Load cells
			(ER1) 7) Annual Report	
		Daily, Monthly,	1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4)	1) Shift Register 2) Field Inventory 3) Section wise Thermal
(iii)	Please provide total Thermal SEC of wire rods (total annual thermal	Annually	SCADA Trends 5) Excise Document 6) Energy Totaliser	Energy Consumption 4) Solid flow Meter 5) Liquid Flow
()	energy consumed in kcal/total annual wire rods production in tonne)		7) Fuel Stock Register 8) Stores Finshed Product Stock	Meter 6) Steam Flow Meter 7) Weigh Bridge
			Register	
		Daily, Monthly,	1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4)	1) Energy Meter 2) Shift Register 3) Energy Management
	Places provide total Flectrical SEC of wire rade /total approal electrical	Annually	SCADA Trends 5) Excise Document 6) Energy Totaliser	System 4) Section wise Power consumption
(iv)	Please provide total Electrical SEC of wire rods (total annual electrical	•	7) Daily Power Report 8) Monthly Power Report 9)	
. ,	energy consumed in kwh/total annual wire rods production in tonnes)		Stores Finshed Product Stock Register	
			Stores i manea i roddet stock negister	
d.6	Strips			
4.0		Daily, Monthly,	1) OEM Document of Section-wise Process line 2)	1) Equipment/Section wise capacity document from OEM
(i)	Please provide total annual Production Capacity of Strips in tonnes	Annually	Enviromental Consent to establish/operate document	Capacity calculation document submitted for
(1)	rease provide total annual Froduction capacity of Strips in tollines	Aimadily	Environmental consent to establish operate document	Environmental Consent
		Daily, Monthly,	1) Log Sheet 2) CCR SCADA Report/ Trends 3) DPR 4)	Stock Level 2) Weighhfeeders 3) Belt Weigher 4) Solid
(;;)	Please provide total appual production of string in tennes			
(ii)	Please provide total annual production of strips in tonnes	Annually	MPR 5) SAP Entry in PP/SD module 6) Excise record	flow meter 5) Load cells
		 5 1 44 41	(ER1) 7) Annual Report	4) 51 (6 0 1 1 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1
		Daily, Monthly,	1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4)	1) Shift Register 2) Field Inventory 3) Section wise Thermal
(iii)	Please provide total Thermal SEC of strips (total annual thermal energy	Annually	SCADA Trends 5) Excise Document 6) Energy Totaliser	Energy Consumption 4) Solid flow Meter 5) Liquid Flow
\····/	consumed in kcal/total annual strips production in tonne)		7) Fuel Stock Register 8) Stores Finshed Product Stock	Meter 6) Steam Flow Meter 7) Weigh Bridge
			Register	
		Daily, Monthly,	1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4)	1) Energy Meter 2) Shift Register 3) Energy Management
	Please provide total Electrical SEC of strips (total annual electrical	Annually	SCADA Trends 5) Excise Document 6) Energy Totaliser	System 4) Section wise Power consumption
(iv)			7) Daily Power Report 8) Monthly Power Report 9)	
	energy consumed in kwh/total annual strips production in tonnes)		Stores Finshed Product Stock Register	
d.7	Others , if Any			
(i)	Please Provide name of product produced			
,,,		Daily, Monthly,	1) OEM Document of Section-wise Process line 2)	1) Equipment/Section wise capacity document from OEM
(i) (ii)	Please provide total annual Production Capacity of Other product in	Daily, Monthly, Annually	DEM Document of Section-wise Process line 2) Environmental Consent to establish/operate document	Equipment/Section wise capacity document from OEM Capacity calculation document submitted for
,,,		 	1.1	
,,,	Please provide total annual Production Capacity of Other product in		1.1	2) Capacity calculation document submitted for
,,,	Please provide total annual Production Capacity of Other product in	Annually	Environmental Consent to establish/operate document	Capacity calculation document submitted for Environmental Consent
(ii)	Please provide total annual Production Capacity of Other product in tonnes	Annually Daily, Monthly,	Environmental Consent to establish/operate document 1) Log Sheet 2) CCR SCADA Report/ Trends 3) DPR 4)	Capacity calculation document submitted for Environmental Consent Stock Level 2) Weighhfeeders 3) Belt Weigher 4) Solid
(ii)	Please provide total annual Production Capacity of Other product in tonnes	Annually Daily, Monthly,	Environmental Consent to establish/operate document 1) Log Sheet 2) CCR SCADA Report/ Trends 3) DPR 4) MPR 5) SAP Entry in PP/SD module 6) Excise record	Capacity calculation document submitted for Environmental Consent Stock Level 2) Weighhfeeders 3) Belt Weigher 4) Solid
(ii)	Please provide total annual Production Capacity of Other product in tonnes Please provide total annual production of others in tonnes	Annually Daily, Monthly, Annually Daily, Monthly,	Enviromental Consent to establish/operate document 1) Log Sheet 2) CCR SCADA Report/ Trends 3) DPR 4) MPR 5) SAP Entry in PP/SD module 6) Excise record (ER1) 7) Annual Report 1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4)	Capacity calculation document submitted for Environmental Consent Stock Level 2) Weighhfeeders 3) Belt Weigher 4) Solid flow meter 5) Load cells Shift Register 2) Field Inventory 3) Section wise Thermal
(ii)	Please provide total annual Production Capacity of Other product in tonnes Please provide total annual production of others in tonnes Please provide total Thermal SEC of others (total annual thermal energy	Annually Daily, Monthly, Annually	Enviromental Consent to establish/operate document 1) Log Sheet 2) CCR SCADA Report/ Trends 3) DPR 4) MPR 5) SAP Entry in PP/SD module 6) Excise record (ER1) 7) Annual Report 1) Log Book 2) DPR 3) MPR 4) SCADA Screen Shots 4) SCADA Trends 5) Excise Document 6) Energy Totaliser	Capacity calculation document submitted for Environmental Consent Stock Level 2) Weighhfeeders 3) Belt Weigher 4) Solid flow meter 5) Load cells Shift Register 2) Field Inventory 3) Section wise Thermal Energy Consumption 4) Solid flow Meter 5) Liquid Flow
(ii)	Please provide total annual Production Capacity of Other product in tonnes Please provide total annual production of others in tonnes	Annually Daily, Monthly, Annually Daily, Monthly,	Enviromental Consent to establish/operate document 1) Log Sheet 2) CCR SCADA Report/ Trends 3) DPR 4) MPR 5) SAP Entry in PP/SD module 6) Excise record (ER1) 7) Annual Report 1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4) SCADA Trends 5) Excise Document 6) Energy Totaliser 7) Fuel Stock Register 8) Stores Finshed Product Stock	Capacity calculation document submitted for Environmental Consent Stock Level 2) Weighhfeeders 3) Belt Weigher 4) Solid flow meter 5) Load cells Shift Register 2) Field Inventory 3) Section wise Thermal
(ii)	Please provide total annual Production Capacity of Other product in tonnes Please provide total annual production of others in tonnes Please provide total Thermal SEC of others (total annual thermal energy	Annually Daily, Monthly, Annually Daily, Monthly, Annually	Enviromental Consent to establish/operate document 1) Log Sheet 2) CCR SCADA Report/ Trends 3) DPR 4) MPR 5) SAP Entry in PP/SD module 6) Excise record (ER1) 7) Annual Report 1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4) SCADA Trends 5) Excise Document 6) Energy Totaliser 7) Fuel Stock Register 8) Stores Finshed Product Stock Register	2) Capacity calculation document submitted for Environmental Consent 1) Stock Level 2) Weighhfeeders 3) Belt Weigher 4) Solid flow meter 5) Load cells 1) Shift Register 2) Field Inventory 3) Section wise Thermal Energy Consumption 4) Solid flow Meter 5) Liquid Flow Meter 6) Steam Flow Meter 7) Weigh Bridge
(ii)	Please provide total annual Production Capacity of Other product in tonnes Please provide total annual production of others in tonnes Please provide total Thermal SEC of others (total annual thermal energy consumed in kcal /total annual other production in tonne)	Annually Daily, Monthly, Annually Daily, Monthly, Annually Daily, Monthly,	Enviromental Consent to establish/operate document 1) Log Sheet 2) CCR SCADA Report/ Trends 3) DPR 4) MPR 5) SAP Entry in PP/SD module 6) Excise record (ER1) 7) Annual Report 1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4) SCADA Trends 5) Excise Document 6) Energy Totaliser 7) Fuel Stock Register 8) Stores Finshed Product Stock Register 1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4)	2) Capacity calculation document submitted for Environmental Consent 1) Stock Level 2) Weighhfeeders 3) Belt Weigher 4) Solid flow meter 5) Load cells 1) Shift Register 2) Field Inventory 3) Section wise Thermal Energy Consumption 4) Solid flow Meter 5) Liquid Flow Meter 6) Steam Flow Meter 7) Weigh Bridge 1) Energy Meter 2) Shift Register 3) Energy Management
(ii)	Please provide total annual Production Capacity of Other product in tonnes Please provide total annual production of others in tonnes Please provide total Thermal SEC of others (total annual thermal energy	Annually Daily, Monthly, Annually Daily, Monthly, Annually	Enviromental Consent to establish/operate document 1) Log Sheet 2) CCR SCADA Report/ Trends 3) DPR 4) MPR 5) SAP Entry in PP/SD module 6) Excise record (ER1) 7) Annual Report 1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4) SCADA Trends 5) Excise Document 6) Energy Totaliser 7) Fuel Stock Register 8) Stores Finshed Product Stock Register 1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4) SCADA Trends 5) Excise Document 6) Energy Totaliser	2) Capacity calculation document submitted for Environmental Consent 1) Stock Level 2) Weighhfeeders 3) Belt Weigher 4) Solid flow meter 5) Load cells 1) Shift Register 2) Field Inventory 3) Section wise Thermal Energy Consumption 4) Solid flow Meter 5) Liquid Flow Meter 6) Steam Flow Meter 7) Weigh Bridge
(ii)	Please provide total annual Production Capacity of Other product in tonnes Please provide total annual production of others in tonnes Please provide total Thermal SEC of others (total annual thermal energy consumed in kcal /total annual other production in tonne)	Annually Daily, Monthly, Annually Daily, Monthly, Annually Daily, Monthly,	Enviromental Consent to establish/operate document 1) Log Sheet 2) CCR SCADA Report/ Trends 3) DPR 4) MPR 5) SAP Entry in PP/SD module 6) Excise record (ER1) 7) Annual Report 1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4) SCADA Trends 5) Excise Document 6) Energy Totaliser 7) Fuel Stock Register 8) Stores Finshed Product Stock Register 1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4) SCADA Trends 5) Excise Document 6) Energy Totaliser 7) Daily Power Report 8) Monthly Power Report 9)	2) Capacity calculation document submitted for Environmental Consent 1) Stock Level 2) Weighhfeeders 3) Belt Weigher 4) Solid flow meter 5) Load cells 1) Shift Register 2) Field Inventory 3) Section wise Thermal Energy Consumption 4) Solid flow Meter 5) Liquid Flow Meter 6) Steam Flow Meter 7) Weigh Bridge 1) Energy Meter 2) Shift Register 3) Energy Management
(ii)	Please provide total annual Production Capacity of Other product in tonnes Please provide total annual production of others in tonnes Please provide total Thermal SEC of others (total annual thermal energy consumed in kcal /total annual other production in tonne) Please provide total Electrical SEC of others (total annual electrical	Annually Daily, Monthly, Annually Daily, Monthly, Annually Daily, Monthly,	Enviromental Consent to establish/operate document 1) Log Sheet 2) CCR SCADA Report/ Trends 3) DPR 4) MPR 5) SAP Entry in PP/SD module 6) Excise record (ER1) 7) Annual Report 1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4) SCADA Trends 5) Excise Document 6) Energy Totaliser 7) Fuel Stock Register 8) Stores Finshed Product Stock Register 1) Log book 2) DPR 3) MPR 4) SCADA Screen Shots 4) SCADA Trends 5) Excise Document 6) Energy Totaliser	2) Capacity calculation document submitted for Environmental Consent 1) Stock Level 2) Weighhfeeders 3) Belt Weigher 4) Solid flow meter 5) Load cells 1) Shift Register 2) Field Inventory 3) Section wise Thermal Energy Consumption 4) Solid flow Meter 5) Liquid Flow Meter 6) Steam Flow Meter 7) Weigh Bridge 1) Energy Meter 2) Shift Register 3) Energy Management
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(i)	Please specify type of boiler	Annual	1) OEM Document	
(ii)	Please specify Rated Capacity of boiler	Continuous, Hourly, Daily, Monthly	DEM document on Boiler Capacity 2) Predicted performance Data (PPD) for Boiler 3) Environmental Consent to Operate	Capacity calculation submitted for Environmental Consent
(iii)	Please provide the total amount of Steam Generation form this boiler in Tonnes per year	Continuous, Hourly, Daily, Monthly	1) Log Sheet 2) DCS/ SCADA Trend 3) DGR 4)MGR 5) SAP Entry in PP/PM Module	1) Steam Flow Meter 2) Process steam Consumption report 3) Log Book
(iv)	Please provide the total annual running hours of boiler	Continuous, Hourly, Daily, Monthly	1) Log Sheet 2) DCS/ SCADA Trend 3) DGR 4)MGR 5) SAP Entry in PP/PM Module	1) Hour Meter 2) Log book
(v)	Please provide the total amount of Coal Consumption in Tonne	Continuous, Hourly, Daily, Monthly	1) Log Sheet 2) DCS/ SCADA Trend 3) DGR 4)MGR 5) SAP Entry in PP/PM Module	1) Weigh Feeder 2) Solid flow Meter 3) Coal Storage register 4) Storage Level
(vi)	Please provide the annual average Gross Calorific Value of Coal in kcal/kg	Daily, Monthly, Yearly	1) Daily Internal Report from Lab on Fuel Proximate Analysis performed on each lot. 2) Test Certificate from Government Accredited lab. (Plant to maintain minimum 1 sample test in a quarter for Proximate and Ultimate Analysis i.e. 4 test certificates in a year for each fuel in case of CPP/Cogen Fuel, for Process Fuel 1 sample test in a quarter for Proximate Analysis) 3) Purchase Order, where guaranteed GCV range is mentioned	Lab Register on Fuel Testing for Proximate Analysis 2) Calibration Record of instrument used for testing
(vii)/(ix)/(xi)	Please provide the total consumption of Fuel - 2/Fuel - 3/Fuel-4	Continuous, Hourly, Daily, Monthly	1) DGR 2) MGR 3) CPP/Cogen Log Sheet 4) SAP Entry in MM/PP/FI module 5) Annual Report	1)Belt Weigher before Fuel Bunker
(viii)/(x)/(xi i)	Please provide the annual average Gross Calorific Value of Fuel - 2/Fuel - 3/Fuel-4 in kcal/kg	Daily, Monthly, Yearly	1) DGR 2) MGR 3) Lab Test Report	Lab Register on Fuel Testing for Proximate Analysis 2) Calibration Record of instrument used for testing
(xiii)	Please provide the annual average of Feed water Temperature in °C	Continuous, Hourly, Daily, Monthly	1) DGR 2) DCS/SCADA Trends	
(xiv)	Please provide annual average operating Efficiency of Boiler (%)	Continuous, Hourly, Daily, Monthly	Indirect Method or Direct method calculation	
(xv)	Please provide annual average Super Heated Steam outlet Pressure (Operating) in kg/cm ²	Continuous, Hourly, Daily, Monthly	1) DGR 2) DCS/SCADA Trends	1) Field Pressure Meter
(xvi)	Please provide annual average Super Heated Steam outlet Temperature (Operating) in °C	Continuous, Hourly, Daily, Monthly	1) DGR 2) DCS/SCADA Trends	1) Field Temperature Meter
(xvii)	Please provide annual average Super Heated Steam Enthalpy (Operating) in kcal/kg	Continuous, Hourly, Daily, Monthly	1) Steam Table	
(xviii)	Please provide Design Efficiency of the boiler in %	Yearly	OEM document on Boiler Efficiency 2) Predicted performance Data (PPD) for Boiler	1) Design Calculation
(xix)	Formula Protected (Total steam generated/ total annual running hours of boiler)	 		
(xx)	Formula Protected (Total fuel consumption x GCV of Fuel consumption/ Total steam generated)			
(xxi)	Formula Protected ([(Coal Consumption (Tonne) * GCV of Coal (kcal/kg)])/ [(Coal Consumption (Tonne) * GCV of Coal) + (Type of Fuel – 2 (Tonne) * GCV of Fuel – 2 (kcal/kg)) + (Type of Fuel – 3 (Tonne) * GCV of Fuel – 3 (kcal/kg)) + (Type of Fuel – 4 (Tonne) * GCV of Fuel – 4 (kcal/kg)])) Formula protected (addition of Total Steam generated by Process			
e1.6	Boiler)			

	Communic management of (Malachted Avenue f - 11 5 B B - 11 -			
e1.7	Formula protected (Weighted Average of all 5 Process Boiler			
	Operating Efficiency) Formula protected (addition of Total operating capacity of Process			
e1.8	Boiler)			
e1.9	Formula protected (SEC Weighted average of all 5 Process Boilers)			
e1.10	Formula protected (Weighted Percentage of Coal Energy Used in			
61.10	steam Generation in all 5 process boilers)			
e2	Co-Gen Boiler used for Power generation			
e2.1/e2.2/ e2.3/e2.4/ e2.5	Boiler 6/ Boiler 7/ Boiler 8/ Boiler 9/Boiler 10			
(i)	Please specify type of boiler	Annual	1) OEM Document	
	Please specify Rated Capacity of boiler	Continuous, Hourly, Daily, Monthly	1) OEM document on Boiler Capacity 2) Predicted performance Data (PPD) for Boiler 3) Environmental Consent to Operate	Capacity calculation submitted for Environmental Consent
(iii)	Please provide the total amount of Steam Generation form this boiler in Tonnes per year	Continuous, Hourly, Daily, Monthly	1) Log Sheet 2) DCS/ SCADA Trend 3) DGR 4)MGR 5) SAP Entry in PP/PM Module	1) Steam Flow Meter 2) Process steam Consumption report 3) Log Book
(iv)	Please provide the total annual running hours of boiler	Continuous, Hourly, Daily, Monthly	1) Log Sheet 2) DCS/ SCADA Trend 3) DGR 4)MGR 5) SAP Entry in PP/PM Module	1) Hour Meter 2) Log book
(v)	Please provide the total amount of Coal Consumption in Tonne	Continuous, Hourly, Daily, Monthly	1) Log Sheet 2) DCS/ SCADA Trend 3) DGR 4)MGR 5) SAP Entry in PP/PM Module	1) Weigh Feeder 2) Solid flow Meter 3) Coal Storage register 4) Storage Level
(vi)	Please provide the annual average Gross Calorific Value of Coal in kcal/kg	Daily, Monthly, Yearly	Daily Internal Report from Lab on Fuel Proximate Analysis performed on each lot. 2) Test Certificate from Government Accredited lab. (Plant to maintain minimum 1 sample test in a quarter for Proximate and Ultimate Analysis i.e. 4 test certificates in a year for each fuel in case of CPP/Cogen Fuel, for Process Fuel 1 sample test in a quarter for Proximate Analysis) 3) Purchase Order, where guaranteed GCV range is mentioned	Lab Register on Fuel Testing for Proximate Analysis 2) Calibration Record of instrument used for testing
(vii)/(ix)/(xi)	Please provide the total consumption of Fuel - 2/Fuel - 3/Fuel-4	Continuous, Hourly, Daily, Monthly	1) DGR 2) MGR 3) CPP/Cogen Log Sheet 4) SAP Entry in MM/PP/FI module 5) Annual Report	1)Belt Weigher before Fuel Bunker
	Please provide the annual average Gross Calorific Value of Fuel - 2/Fuel - 3/Fuel-4 in kcal/kg	Daily, Monthly, Yearly	1) DGR 2) MGR 3) Lab Test Report	Lab Register on Fuel Testing for Proximate Analysis 2) Calibration Record of instrument used for testing
(xiii)	Please provide the annual average of Feed water Temperature in °C	Continuous, Hourly, Daily, Monthly	1) DGR 2) DCS/SCADA Trends	
(xiv)	Please provide annual average operating Efficiency of Boiler (%)	Continuous, Hourly, Daily, Monthly	1) Indirect Method or Direct method calculation	
(xv)	Please provide annual average Super Heated Steam outlet Pressure (Operating) in kg/cm ²	Continuous, Hourly, Daily, Monthly	1) DGR 2) DCS/SCADA Trends	1) Field Pressure Meter
(xvi)	Please provide annual average Super Heated Steam outlet Temperature (Operating) in $^{\circ}\text{C}$	Continuous, Hourly, Daily, Monthly	1) DGR 2) DCS/SCADA Trends	1) Field Temperature Meter
(xvii)	Please provide annual average Super Heated Steam Enthalpy (Operating) in kcal/kg	Continuous, Hourly, Daily, Monthly	1) Steam Table	
(xviii)	Please provide Design Efficiency of the boiler in %	Yearly	OEM document on Boiler Efficiency 2) Predicted performance Data (PPD) for Boiler	1) Design Calculation

		-		
(xix)	Formula Protected (Total steam generated/ total annual running hours of boiler)			
(xx)	Formula Protected (Total fuel consumption x GCV of Fuel consumption/ Total steam generated)			
(xxi)	Formula Protected ([(Coal Consumption (Tonne) * GCV of Coal (kcal/kg)])/ [(Coal Consumption (Tonne) * GCV of Coal) + (Type of Fuel – 2 (Tonne) * GCV of Fuel – 2 (kcal/kg)) + (Type of Fuel – 3 (Tonne) * GCV of Fuel – 3 (kcal/kg)) + (Type of Fuel – 4 (Tonne) * GCV of Fuel – 4 (kcal/kg)))			
е3	Weighted Average Boiler 6-10			
e3.1	Formula protected (addition of Total Steam generated by Cogen Boiler)			
e3.2	Formula protected (Weighted Average of all 5 Cogen Boiler Operating Efficiency)			
e3.3	Formula protected (addition of Total operating capacity of Cogen Boiler)			
e3.4	Formula protected (SEC Weighted average of all 5 Cogen Boilers)			
e3.5	Formula protected (Weighted Percentage of Coal Energy Used in steam Generation in all 5 Cogen boilers)			
e3.6	Formula Protected (Total Operating efficiency(process boiler) X Total operating capacity(Process boiler) + Total Operating efficiency(Cogen boiler) X Total operating capacity(Cogen boiler))/(Total operating capacity(Process boiler))			
e4	Note: DCs to provide separate Excel sheet in the Boiler format as specified above If no of boiler exceeds for additional nos of boliers installed for Cogen/Steam			
В	Electricity Consumption and cost			
B.1	Electricity from Grid / Other (Including Colony and Others)			
(i)	Please provide annual electricity purchase from the grid in Lakh kWh.	 Daily, Monthly	Monthly Electricity Bills from Grid 2) Internal Meter reading records for grid incomer	Energy Management System
(ii)	Please provide renewal electricity consumption through wheeling in Lakh kWh.	 Daily, Monthly	Open Access records 2) Electricity Bills for renewal energy 3) Renewal Purchase Obligation document	Energy Management System
(iii)	Please provide electricity consumption from CPP located outside of the plant boundary though wheeling in Lakh kWh.	Daily, Monthly	Open Access records 2) Electricity Bills (for Wheeling)	Energy Management System
(iv)	Please provide Renewal Purchase obligation of plant for the current year in % (Solar and Non-Solar).	Yearly	1) Renewal Purchase Obligation document	
(v)	Please provide Renewal Purchase obligation of plant for the current year in Lakh kWh (Solar and Non-Solar).	Yearly	1) Renewal Purchase Obligation document	
(vi)	Please provide Renewal Purchase obligation of plant for the current year in MW (Solar and Non-Solar).	 Yearly	1) Renewal Purchase Obligation document	
(vii)	Please provide Renewal Energy Generator Capacity in MW as approved by MNRE	Yearly	Certificate for Registration' to the concerned Applicant as 'Eligible Entity' confirming its entitlement to receive Renewable Energy Certificates for the proposed RE Generation project	

(viii)	Please provide Quantum of Renewable Energy Certificates (REC) obtained as a Renewal Energy Generator (Solar & Non-Solar) in terms of REC equivalnet to 1 MWh	The quantity of exported power (partially or fully) on which Renewable Energy Certificates have been earned by Designated Consumer in the assessment year under REC mechanism shall be treated as Exported power and normalization will apply. However, the normalized power export will not qualify for issue of Energy Saving Certificates under PAT Scheme.	Lot,Yearly	1) Renewable Energy Certificates	
(ix)	Please provide Quantum of Energy sold interms of preferential tariff under REC Mechanism in MWh	The quantity of exported power (partially or fully) from Renewable energy which has been sold at a preferential tariff by the Designated consumer in the assessment year under REC mechanism shall be treated as Exported power. However, the normalized power export will not qualify for issue of Energy Saving Certificates under PAT Scheme.	Lot, Yearly	Power Purchase Agreement (PPA) for the capacity related to such generation to sell electricity at preferential tariff determined by the Appropriate Commission	
(x)	Please provide plant connected load in kW.		Monthly	1) L-Form document 2) Electrical Inspectorate record	1) Total connected Load (TCL) of Plant 2) Equipment List
(xi)	Please provide plant contract demand with utility in KVA.		Monthly	1) Monthly Electricity Bills from Utility	
(xii)	Please fill the Baseline SEC as per PAT notification in TOE/Tonne			S.O.687(E), 30th March, 2012	
(xiii)	Please fill the Target SEC as per PAT notification in TOE/Tonne			S.O.687(E), 30th March, 2012	
(xiv)	Formula Protected (saving target as per PAT notification = Notified Target SEC-Baseline SEC in toe/t)				
(xv)	Please fill the baseline equivalent production as per PAT Notification			S.O.687(E), 30th March, 2012	
(xvi)	Formula protected (Total electricity purchased from grid = Electricity purchased from grid + Renewal Electricity Consumption + Electricity consumption from CPP outside Plant boundary through wheeling)				
(xvii)	Formula protected (Total Electricity Purchased from grid/ Other with out colony/construction power= Total electricity purchased from grid -Electricity supplied to Colony/Others)				
(xviii)	Formula protected (Equivalent thermal energy of purchase electricity from the grid / others = Total electricity from the grid / other without colony/construction power * 860/10)				
b.2	Own Generation				
B.2.1	Through DG set				
	Please specify whether DG set is connected to grid (the further calculation is based on selection of Yes/No)	If selected No undertaking from competent authority has to be provided	Annual	undertaking from Competent authority 2) Document of synchorinazation from DISCOMS	
(ii)	Please provide installed capacity of DG sets in MW.		Annual	1) OEM document for capacity 2) Rating plate of Generator	1) Capacity Enhancement document
(iii)	Please provide gross unit generation from DG sets in Lakh kWh.		Continuous, Hourly, daily, Monthly	Daily Power Report 2) Monthly Power Report 3) DG main energy meter reading record 4) Energy Managemen System data	1)Electrical Shift log book 2) Utility Shift Log book

(iv)	Please provide annual fuel consumption for generating power from DG		Continuous, Hourly,	1) Daily Generation Report 2) Monthly Generation Report 3) DG Log Sheet 4) SAP Entry in MM/PP/FI	Flow Meter, Dip measurement in day tank
(10)	in kilo litres		ually, Monthly	module 5) Annual Report	
(v)	Please provide average density of fuel used for generating power in kg/lit		Lot, Montly, Yearly	Test report from Supplier 2) Internal Test Report from lab 3) Test report from Government Accridited Lab 4) Standard Value as per Notification	Lab Register
(vi)	Please provide DG Auxilliary Power Consumption for Baseline Year and Assessment year in %		Continuous, Hourly, daily, Monthly	Daily Power Report 2) Monthly Power Report 3) DG main energy meter reading record 4) Energy Managemen System data	1) Energy Meter 2) Equipment List
(vii)	Please provide designed gross heat rate of DG sets in kcal/kWh.		Annual	OEM document on designed heat rate 2) OEM document on Specific Fuel consumption in kWh/ltr	
(viii)	Please provide operating heat rate of DG sets in kcal/kWh.		Annual	Daily Fuel Consumption Report 2) Monthly Fuel consumption Report 3) DG main energy meter reading record 4) OEM document on Specific Fuel consumption in kWh/ltr	Fuel shift log book 2) Utility Shift Log book 3) Energy meter
(ix)	Please provide annual running hours of DG sets.		Continuous, Hourly, daily, Monthly	Daily Power Report 2) Monthly Power Report 3) DG hour meter reading record 4) Energy Managemen System data	1)Electrical Shift log book 2) Utility Shift Log book
B.2.2	Thus, inh shaans houbins				
D.2.2	Through steam turbine	If selected No undertaking from	Annual	undertaking from Competent authority 2) Document	
(i)	Please provide whether your Steam Turbine is connected to grid or not by selecting Yes/No	competent authority has to be provided	7.1.11.00.1	of synchorinazation from DISCOMS	
(i)	Please provide installed capacity of all the Units in MW		Annual	OEM document for capacity 2) Rating plate of Generator	1) Capacity Enhancement document 2) R&M document
(ii)	Please provide gross unit generation of all the Units in Lakh kWh		Continuous, Hourly, daily, Monthly	Daily Generation Report 2) Monthly Generation Report 3) CPP main energy meter reading record 4) Energy Managemen System data	1) Energy Meter
	Please provide auxiliary power consumption (APC) in % in Sheet! Form Sa1 CPP		Continuous, Hourly, daily, Monthly	Daily Power Report 2) Monthly Power Report 3) CPP main energy meter reading record 4) Energy Managemen System data	1) Energy Meter 2) Equipment List
(iv)	Please provide Design Heat Rate of all the Units in kcal/kWh in Sheet! Form Sa1 CPP.		Annual	OEM document on designed heat rate	1) PG test documement
(V)	Please provide the operating heat rate in kcal/kWh in Sheet! Form Sa1 CPP		Annual	Daily Generation Report 2) Monthly Generation Report 3) CPP main energy meter reading record 4) Energy Managemen System data 5) annual Fuel consumption report	1) Energy Meter 2) Fuel shift log book
		RUCTION FOR FILLING UP THE FORM-S	Sa ₁ CPP (Detail of pro	duction and Energy Consumption)	
1	OEM Curve / HBD data			A OFM Company of the second se	4 Next Design de suprest fra 2514
1.a	Please provide unit wise Design capacity of CPP, boiler efficency, Turbine Heat Rate as provided by Original Equipment Manaufacturer (OEM) and R2, Costant 1, Constant 2 and Constant 3 from OEM curve or HBD data curve equation and Trubine Heat Rate kcal/kwh from HBD curve or Load Vs Heat Rate curve (at 100% Load)			OEM Curves and docuemts/ COD documents 2 PG Test Report 3. HMB diagram at different load (Minimum 5-7 nos of (x,y) co-ordinates to plot as curve 4. Design Boiler Efficiency Document from Original Equipment Manufacturer (OEM) 5. Design Coal Analysis Document as per OEM	1.Plant Design document from OEM
	Formula protected (Weighted average of boiler efficency, Turbine Heat Rate and unit Heat Rate)				
2	Unit wise Operating Data Details				

2.a	Please provide unit wise operating load of CPP in MW , Unit Load Factor in %, Gross Generation in Lakh Units, Unit Gross Heat Rate in Kcal/kwh for Baseline Year (2007-10) and Assesment year		Continuous, Daily, Monthly	Daily Generation Report 2) Monthly Generation Report 3) Shift Report and Register 4) Unit Log book 5) Coal Consumption records 6) Stores Stock Register 7)Purchase Order 8) SAP Entry in PP/SD mosule	Generator Energy Meter (Sealed) 2) Energy Management System 3) Weigh feeder 4) Bunker load Cells Fuel GCV test report (Internal and External)
2.b	Formula Protected (Total station operating load in MW, Total annual generation of CPP and weighted average of plant Load Factor, Station Gross Heat Rate in Kcal/kwh for Baseline Year (2007-10) and Assesment year				
2.c	Please provide Station Auxillary Power Consumption for Baseline year and Assessment year		Continuous, Daily, Monthly	Daily Generation Report 2) Monthly Generation Report 3) Shift Report and Register	Energy Meter (Sealed) 2) Energy Management System
3	Plant Load Factor Details				
3.a	Loss of PLF due to non-availability of fuel/schedule/backing				
3.d	down/any external factor/Unforeseen factors				
3.a.1	Please provide unit wise Average Operating Load (MW) and operation hours (Hours) due to Coal Unavailability, Scheduling, backing down, any other external factor for baseline year and Assessment year			1) Daily Generation Report 2) Monthly Generation Report 3) Shift Report and Register 4) Generation Schedule from Load Despatch Centre 5) External Breakdown Report 6) Fuel Unavailability document/record from external agencies 7) Coal Linkage Document 8) Stores Stocks Register 9) SAP Entry in PP/SD/PM Module 10) Stocks duration report 11) Log Book	1) Purchase order 2) Rail Racks details 3) Weighing Document 4) Shift Register 5) Shift Reports 6) Energy Meter Readings 7) Energy Management System
3.a.2	Formula Protected (Total station Average Operating Load (MW) and operation hours (Hours) due to Coal Unavailability, Scheduling, backing down, any other external factor for baseline year and Assessment year for Baseline Year (2007-10) and Assessment year)				
3.b	Loss of PLF due to non-availability of fuel/schedule/backing down/any external factor/Unforeseen factors/Internal Factor				
3.b.1	Please provide unit wise operation hours (Hours) caused by Forced Outage/ Unavailability, Planned Maintenance Outage/ Planned Unavailability and Average Operating Load (MW) and with Operating hours due to Internal factor for baseline year and Assessment year			Daily Generation Report 2) Monthly Generation Report 3) Shift Report and Register 4) Generation Schedule from Load Despatch Centre 5) External Breakdown Report 6) Fuel Unavailability document/record from external agencies 7) Coal Linkage Document 8) Log Book	Shift Register 2) Shift Reports 3) Energy Meter Readings Energy Management System 5) Breakdown reports (Internal and External)
3.b.2	Formula Protected (unit wise operation hours (Hours) caused by Forced Outage/ Unavailability, Planned Maintenance Outage/ Planned Unavailability and Average Operating Load (MW) and with Operating hours due to Internal factor for baseline year and Assessment year)				
4	Unitwise Fuel Analysis Details (As Fired Basis)@				
4.a	Please provide unit wise ultimate analysis (Volatile Matter, Total Moisture, Ash) and proximate analysis (Hydrogen, Sulphur, Nitrogen) of fuel used	In case of differnce in Design Coal Quality for differnent units, Coal analysis to be given unit wise		Daily Internal Report from Lab on Fuel Proximate Analysis performed on each lot. 2) Test Certificate from Government Accredited lab. (Plant to maintain minimum 1 sample test in a quarter for Proximate and Ultimate Analysis i.e. 4 test certificates in a year for each soild fuel 3) Purchase Order, where guaranteed GCV range is mentioned	internal test report 2) Callibration report of measuring equipment 3) Lab register 4) Lab analysis prcedure documents 5) Sampling methodology document
B.2.3	Through Gas turbine Please provide whether your Gas Turbina is connected to grid or not by		Annual		
(i)	Please provide whether your Gas Turbine is connected to grid or not by selecting Yes/No		Annual		

(ii)	Please provide installed capacity of all the Units in MW.	Annual	OEM document for capacity 2) Rating plate of Generator	1) Capacity Enhancement document 2) R&M document
(iii)	Please provide gross unit generation of all the Units in Lakh kWh.	Continuous, Hourly, daily, Monthly	1) Daily Generation Report 2) Monthly Generation Report 3) CPP main energy meter reading record 4) Energy Managemen System data	1) Energy Meter
(iv)	Please provide Plant Load Factor (PLF) in %	Continuous, Hourly, daily, Monthly	Daily Generation Report 2) Monthly Generation Report 3) CPP main energy meter reading record 4) Energy Management System data 5)OEM document for capacity 6) Rating plate of turbine	Energy Meter 2) Break down report 3) Operators Shift Register 4) Capacity Enhancement document 5) R&M document
(v)	Please provide auxiliary power consumption (APC) in %.	Continuous, Hourly, daily, Monthly	1) Daily Power Report 2) Monthly Power Report 3) CPP main energy meter reading record 4) Energy Managemen System data	1) Energy Meter 2) Equipment List
(vi)	Please provide Design Heat Rate of all the Units in kcal/kWh.	Annual	1) OEM document on designed heat rate	1) PG test documement
(vii)	Please provide annual running hours of all the units.	Continuous, Hourly, daily, Monthly	Daily Generation Report 2) Monthly Generation Report 3) Energy Managemen System data	1) Break down report 3) Operators Shift Register
B.2.4	Through Waste Heat Recovery			
(i)	Please provide installed capacity of WHR in MW.	Annual	OEM document for capacity 2) Rating plate of Generator	
(ii)	Please provide gross unit generation from WHR in Lakh kWh.	Hourly, daily, Monthly	(1) Daily Generation Report 2) Monthly Generation Report 3) CPP main energy meter reading record 4) Energy Management System data	1) Energy Meter
(iii)	Please provide running hours.	Hourly, daily, Monthly	Daily Generation Report 2) Monthly Generation Report 3) CPP main energy meter reading record 4) Energy Management System data	1) Break down report 3) Operators Shift Register
B.2.5	Through Co-Generation (Extraction/Back Pressure)			
(i)	Please provide whether your Co-Gen is connected to grid or not by selecting Yes/No	Annual		
(ii)	Please provide installed capacity of all the Units in MW.	Annual	OEM document for capacity 2) Rating plate of Generator	1) Capacity Enhancement document 2) R&M document
(iii)	Please provide gross unit generation of all the Units in Lakh kWh.	Continuous, Hourly, daily, Monthly	Daily Generation Report 2) Monthly Generation Report 3) CPP main energy meter reading record 4) Energy Managemen System data	1) Energy Meter
(iv)	Please provide auxiliary power consumption (APC) in %.	Continuous, Hourly, daily, Monthly	Daily Power Report 2) Monthly Power Report 3) CoGen main energy meter reading record 4) Energy Managemen System data	1) Energy Meter 2) Equipment List
(v)	Please provide Design Heat Rate of Cogen Units in kcal/kWh.	Annual	1) OEM document on designed heat rate	1) PG test documement
(vi)	Please provide annual running hours of Cogen units.	Continuous, Hourly, daily, Monthly	Daily Generation Report 2) Monthly Generation Report 3) Energy Managemen System data	1) Break down report 3) Operators Shift Register
(vii)	Please provide the Enthalpy of the Input Steam in kCal/kg	Continuous, Hourly, daily, Monthly	Cogen Log Sheet 2) Operaters log Register 3) Daily generation Report 4) Monthly Generation Report 5) Energy Managemen System data 6) SAP	1) Operator's Shift Register 2) CPP Break down analysis Report

(viii)	Please provide the Steam Pressure of the Input Steam in Kg/cm2	Continuous, Hourly, daily, Monthly	CPP Log Sheet 2) Operaters log Register 3) Daily generation Report 4) Monthly Generation Report 5) Energy Managemen System data 6) SAP	Operator's Shift Register 2) CPP Break down analysis Report
(ix)	Please provide the Steam Temperature of the Input Steam in °C	Continuous, Hourly, daily, Monthly	CPP Log Sheet 2) Operaters log Register 3) Daily generation Report 4) Monthly Generation Report 5) Energy Managemen System data 6) SAP	Operator's Shift Register 2) CPP Break down analysis Report
(x)	Please provide the Flow rate of the input steam in Tonne per Hour	Continuous, Hourly, daily, Monthly	CPP Log Sheet 2) Operaters log Register 3) Daily generation Report 4) Monthly Generation Report 5) Energy Managemen System data 6) SAP	1) Operator's Shift Register 2) CPP Break down analysis Report
	Details of Steam Extraction 1			
(xi)	Please provide the Steam Pressure at Extraction 1 in Kg/cm2	Continuous, Hourly, daily, Monthly	1) Daily Generation Report 2) Monthly Generation Report 3) DCS/SCADA Records	1) Field Pressure Meter
(xii)	Please provide the Steam Temperature at Extraction 1in °C	Continuous, Hourly, daily, Monthly	1) Daily Generation Report 2) Monthly Generation Report 3) DCS/SCADA Records	1) Field Temperature Meter
(xiii)	Please provide the Enthalpy of the Steam at Extraction 1 in kCal/kg	Continuous, Hourly, daily, Monthly	1) Steam Table	
(xiv)	Please provide the Mass Flow rate of the steam at Extraction 2 in Tonne per Hour	Continuous, Hourly, daily, Monthly	1) Daily Generation Report 2) Monthly Generation Report 3) DCS/SCADA Records	1) Makeup water Reading 2) Field Steam Flow meter reading
	Details of Steam Extraction 2			
(xv)	Please provide the Steam Pressure at Extraction 2 in Kg/cm2	Continuous, Hourly, daily, Monthly	Daily Generation Report 2) Monthly Generation Report 3) DCS/SCADA Records	1) Field Pressure Meter
(xvii)	Please provide the Steam Temperature at Extraction 2 in °C	Continuous, Hourly, daily, Monthly	1) Daily Generation Report 2) Monthly Generation Report 3) DCS/SCADA Records	1) Field Temperature Meter
(xviii)	Please provide the Enthalpy of the Steam at Extraction 2 in kCal/kg	Continuous, Hourly, daily, Monthly	1) Steam Table	
(xix)	Please provide the Mass Flow rate of the steam at Extraction 2 in Tonne per Hour	Continuous, Hourly, daily, Monthly	Daily Generation Report 2) Monthly Generation Report 3) DCS/SCADA Records	1) Makeup water Reading 2) Field Steam Flow meter reading
(xx)	Formula protected (Thermal energy used in process= ((Steam enthalpy x Mass flow rate at Extraction 1) + (steam enthalpy x Mass flow rate at extraction 2))/ 1000)			
(xxi)	Formula protected (Thermal energy used in Power=(Input steam enthalpy x Input Mass flow rate /1000 - Thermal energy used in process)			
(xxii)	Formula protected (% energy used in Power= Thermal energy used in process x 1000/ (Input steam enthalpy x Input Mass flow rate))			
B.2.6	Through Co-Generation (Extraction Cum Condensing)			+
(i)	Please provide whether your Co-Gen is connected to grid or not by selecting Yes/No	Annual		
(ii)	Please provide installed capacity of all the Units in MW.	 Annual Continuous, Hourly,	1) OEM document for capacity 2) Rating plate of Generator	1) Capacity Enhancement document 2) R&M document
			1) Daily Generation Report 2) Monthly Generation	1) Energy Meter

	Т	la .:	In a state of the	late and one in the
(iv)	Diagon provide avvillary power consumption (ADC) in 9/	Continuous, Hourly,	1) Daily Power Report 2) Monthly Power Report 3)	1) Energy Meter 2) Equipment List
(iv)	Please provide auxiliary power consumption (APC) in %.	daily, Monthly	CoGen main energy meter reading record 4) Energy	
		Annual	Managemen System data	A) DC hart de company
(v)	Please provide Design Heat Rate of Cogen Units in kcal/kWh.	Annual	1) OEM document on designed heat rate	1) PG test documement
		Continuous, Hourly,	Daily Generation Report 2) Monthly Generation	1) Break down report 3) Operators Shift Register
(vi)	Please provide annual running hours of Cogen units.	daily, Monthly	Report 3) Energy Managemen System data	1) Dreak down report 3) Operators sillit negister
(*1)	nease provide annual running nours of cogen units.	adily, ividitally	neport of Energy Managemen System data	
		Continuous, Hourly,	1) Cogen Log Sheet 2) Operaters log Register 3) Daily	1) Operator's Shift Register 2) CPP Break down analysis
		daily, Monthly	generation Report 4) Monthly Generation Report 5)	Report
(vii)	Please provide the Enthalpy of the Input Steam in kCal/kg	,, , , ,	Energy Managemen System data 6) SAP	
		Continuous, Hourly,	1) CPP Log Sheet 2) Operaters log Register 3) Daily	1) Operator's Shift Register 2) CPP Break down analysis
(viii)	Please provide the Steam Pressure of the Input Steam in Kg/cm2	daily, Monthly	generation Report 4) Monthly Generation Report 5)	Report
(viii)	rease provide the steam riessure of the input steam ill Ng/Ciliz		Energy Managemen System data 6) SAP	
l		Continuous, Hourly,	1) CPP Log Sheet 2) Operaters log Register 3) Daily	1) Operator's Shift Register 2) CPP Break down analysis
(ix)	Please provide the Steam Temperature of the Input Steam in °C	daily, Monthly	generation Report 4) Monthly Generation Report 5)	Report
. ,			Energy Managemen System data 6) SAP	
		Continuous, Hourly,	1) CPP Log Sheet 2) Operaters log Register 3) Daily	Operator's Shift Register 2) CPP Break down analysis
		daily, Monthly	generation Report 4) Monthly Generation Report 5)	Report Register 2) CPP Break down analysis
(x)	Please provide the Flow rate of the input steam in Tonne per Hour	daily, Wichtiny	Energy Managemen System data 6) SAP	report
			Energy management system data of sen	
	Details of Steam Extraction 1			
		Continuous, Hourly,	1) Daily Generation Report 2) Monthly Generation	1) Field Pressure Meter
(xi)	Please provide the Steam Pressure at Extraction 1 in Kg/cm2	daily, Monthly	Report 3) DCS/SCADA Records	
		Continuous, Hourly,	1) Daily Generation Report 2) Monthly Generation	1) Field Temperature Meter
(xii)	Please provide the Steam Temperature at Extraction 1in °C	daily, Monthly	Report 3) DCS/SCADA Records	
			4) 5: 7.11	
(:::)	Discourant the the Eathering of the Change of Entrophics 11 12 17	Continuous, Hourly,	1) Steam Table	
(xiii)	Please provide the Enthalpy of the Steam at Extraction 1 in kCal/kg	daily, Monthly		
		Continuous, Hourly,	Daily Generation Report 2) Monthly Generation	Makeup water Reading 2) Field Steam Flow meter
(xiv)	Please provide the Mass Flow rate of the steam at Extraction 1 in Tonne	daily, Monthly	Report 3) DCS/SCADA Records	reading
(1117)	per Hour	adily, ividitally	neport of bedy senon necords	- Cauring
	Details of Steam Extraction 2			
		Continuous, Hourly,	1) Daily Generation Report 2) Monthly Generation	1) Field Pressure Meter
(xv)	Please provide the Steam Pressure at Extraction 2 in Kg/cm2	daily, Monthly	Report 3) DCS/SCADA Records	
		Continuous, Hourly,	1) Daily Generation Report 2) Monthly Generation	1) Field Temperature Meter
(xvii)	Please provide the Steam Temperature at Extraction 2 in °C	daily, Monthly	Report 3) DCS/SCADA Records	
			100	
(tit)	Discount of the Country of the Change of Country of the Change of the Ch	Continuous, Hourly,	1) Steam Table	
(xviii)	Please provide the Enthalpy of the Steam at Extraction 2 in kCal/kg	daily, Monthly		
		Continuous, Hourly,	Daily Generation Report 2) Monthly Generation	Makeup water Reading 2) Field Steam Flow meter
(xix)	Please provide the Mass Flow rate of the steam at Extraction 2 in Tonne	daily, Monthly	Report 3) DCS/SCADA Records	reading
(AIA)	per Hour	aa,, working	neport of ocolognon necords	
	Formula protected (Thermal energy used in process= ((Steam			
(xx)	enthalpy x Mass flow rate at Extraction 1) + (steam enthalpy x Mass			
- /	flow rate at extraction 2))/ 1000)			
	Formula protected (Thermal energy used in Power=(Input steam			
(xxi)	enthalpy x Input Mass flow rate /1000 - Thermal energy used in			
	process)			
·	Formula protected (% energy used in Power= Thermal energy used in			
(xxii)	process x 1000/ (Input steam enthalpy x Input Mass flow rate))			
	p			

		ı		
= (total Thermal energy used in process/ Total Thermal energy used in				
power)				
Formula protected (Total Own Generation of Electricity)				
Please provide quantity of electricity sold to the grid in Lakh kWh.		Continuous, Hourly, daily, Monthly	Daily Power Report 2) Monthly Power Report 3) Export main energy meter reading record 4) Energy Managemen System data 5) Montly Export bill receipt sent to utility	Export Energy Meter
Please provide quantity of electricity consumed in colony /other in Lakh kWh.		Continuous, Hourly, daily, Monthly	Daily Power Report 2) Monthly Power Report 3) Colony/other main energy meter reading record 4) Energy Managemen System data	1) colony/Others meter
Formula Protected (Electricity Suplied to the grid/others)				
Formula Protected (Equivalent Thermal Energy supplied to the				
Formula Protected (Total Electricity Consumed for Process and Auxiliaries within Plant)				
Solid Frod Consumation				
Coal (Indian) / Pet Coke/Carbon / Coal (Imported) / Coal (Lignite) (Other Solid Fuels)				
Please provide landed cost of Solid fuel i.e. Basic Cost+All Taxes + Freight. The landed cost of last purchase order in the financial year		Annual	Purchase Order for basic rates and taxes 2) Freight document for rates	
Please provide the gross calorific value (As Fired Basis) of Solid fuel consumed in kcal/kg.	Operating Coal Quality- Monthly average of the lots (As Fired Basis), Test Certificate for Coal Analysis including Proximate and Ultimate analysis (Minimum of 4 Samples Test from Government Lab for cross verification quarterly)	Lot, Daily, Monthly, Quarterly	Daily Internal Report from Lab on Fuel Proximate Analysis performed on each lot. 2) Test Certificate from Government Accredited lab. (It is desirable that the plant may maintain minimum 4 sample test in a quarter for Proximate and Ultimate Analysis i.e. 16 test certificates in a year for each fuel) 3) Purchase Order, where guaranteed GCV range is mentioned	-
Please provide the moisture content in sold fuel (As Received Basis) in %		Lot, Daily, Monthly, Quarterly	Daily Internal Report from Lab on Fuel Proximate Analysis performed on each lot. 2) Test Certificate from Government Accredited lab. (It is desirable that the plant may maintain minimum 4 sample test in a quarter for Proximate and Ultimate Analysis i.e. 16 test certificates in a year for each fuel) 3) Purchase Order, where guaranteed moisture % range is mentioned	Lab Register on Fuel Testing for Proximate Analysis 2) Callibration Record of instrument used for testing
Please provide the annual Solid fuel quantity purchased in tonnes.		Lot, Daily, Monthly, Yearly	Purchase Order 2) Stores Receipt 3) SAP Entry in MM/PP/FI module 4) Annual Report	1) Stores Receipt Register
Please provide the annual Solid fuel quantity consumed in power generation(CPP) in tonnes.		Hourly, Daily and Monthly	1) DPR 2) MPR 3) CPP Log Sheet 4) SAP Entry in MM/PP/FI module 5) Annual Report	1)Belt Weigher before Coal Bunker
Please provide the annual Solid fuel quantity consumed in power generation(Cogen) in tonnes.	_	Hourly, Daily and Monthly	1) DPR 2) MPR 3) Cogen Log Sheet 4) SAP Entry in MM/PP/FI module 5) Annual Report	1)Belt Weigher before Coal Bunker
Please provide the annual Solid fuel quantity consumed in process in tonnes.		Hourly, Daily and Monthly	1) DPR 2) MPR 3) Boiler/Digestor/Calciner/Process Log Sheet 4) SAP Entry in MM/PP/FI module 5) Annual Report	1)Belt Weigher before Coal Bunker
Formula protected (Total sold fuel consumption in the power generation and process)				
Formula protected (Equivalent thermal energy used in power generation (CPP))				
Formula protected (Equivalent thermal energy used in power generation (Cogen))				
	Please provide quantity of electricity sold to the grid in Lakh kWh. Please provide quantity of electricity sold to the grid in Lakh kWh. Please provide quantity of electricity consumed in colony /other in Lakh kWh. Formula Protected (Electricity Suplied to the grid/others) Formula Protected (Equivalent Thermal Energy supplied to the grid/others) Formula Protected (Total Electricity Consumed for Process and Auxiliaries within Plant) Solid Fuel Consumption Coal (Indian) / Pet Coke/Carbon / Coal (Imported) / Coal (Lignite) (Other Solid Fuels) Please provide landed cost of Solid fuel i.e. Basic Cost+All Taxes + Freight. The landed cost of last purchase order in the financial year Please provide the gross calorific value (As Fired Basis) of Solid fuel consumed in kcal/kg. Please provide the moisture content in sold fuel (As Received Basis) in % Please provide the annual Solid fuel quantity purchased in tonnes. Please provide the annual Solid fuel quantity consumed in power generation(CPP) in tonnes. Please provide the annual Solid fuel quantity consumed in power generation(Cogen) in tonnes. Please provide the annual Solid fuel quantity consumed in process in tonnes. Formula protected (Total sold fuel consumption in the power generation and process) Formula protected (Equivalent thermal energy used in power generation (CPP)) Formula protected (Equivalent thermal energy used in power	= (total Thermal energy used in process/ Total Thermal energy used in power) Formula protected (Total Own Generation of Electricity) Please provide quantity of electricity sold to the grid in Lakh kWh. Please provide quantity of electricity consumed in colony /other in Lakh kWh. Formula Protected (Electricity Suplied to the grid/others) Formula Protected (Equivalent Thermal Energy supplied to the grid/others) Formula Protected (Total Electricity Consumed for Process and Auxiliaries within Plant) Solid Fuel Consumption Coal (Indian) / Pet Coke/Carbon / Coal (Imported) / Coal (Ugnite) (Other Solid Fuels) Please provide landed cost of Solid fuel i.e. Basic Cost+All Taxes + Freight. The landed cost of last purchase order in the financial year Operating Coal Quality- Monthly average of the lots (As Fired Basis), Test Certificate for Coal Analysis including Proximate and Ultimate analysis (Minimum of 4 Samples Test from Government Lab for cross verification quarterly) Please provide the moisture content in sold fuel (As Received Basis) in % Please provide the annual Solid fuel quantity purchased in tonnes. Please provide the annual Solid fuel quantity consumed in power generation(CPP) in tonnes. Please provide the annual Solid fuel quantity consumed in power generation (Cogen) in tonnes. Please provide the annual Solid fuel quantity consumed in power generation and process) Formula protected (Total sold fuel consumption in the power generation (CPP) in tonnes. Please provide the annual Solid fuel quantity consumed in power generation (CPP) in tonnes. Formula protected (Total sold fuel consumption in the power generation (CPP) in tonnes.	Execute Number	Continuous, Hourly, Department of Electricity 1 Continuous, Hourly, Daily, Monthly 1 Continuous, Hourly, Daily, Monthly 2 Continuous, Hourly, Daily Power Report 2) Monthly Power Report 2) Monthly Power Report 2) Monthly Power Report 3) 2 Continuous, Hourly, Daily, Monthly 2 Continuous, Hourly, Daily, Monthly 2 Continuous, Hourly, Daily Power Report 2) Monthly Power Report 2) Monthly 2 Continuous, Hourly, Daily Power Report 2) Monthly 2 Con

(xi)	Formula protected (Equivalent thermal energy used in processing)			
C.6	Bio mass or Other purchased Renewable solid fuels (pl. specify) baggase, rice husk, etc.			
(i)	Please provide landed cost of Solid Fuel i.e. Basic Cost+All Taxes + Freight. The landed cost of last purchase order in the financial year		Purchase Order for basic rates and taxes 2) Freight document for rates	
(ii)	Please provide the gross calorific value (As Fired Basis) of Fuel in kcal/kg.	,	Daily Internal Report from Lab on Fuel Proximate Analysis performed on each lot. 2) Test Certificate from Government Accredited lab. (It is desirable that the plant may maintain minimum 4 sample test in a quarter for Proximate and Ultimate Analysis i.e. 16 test certificates in a year for each fuel) 3) Purchase Order, where guaranteed GCV range is mentioned	Lab Register on Fuel Testing for Proximate Analysis 2) Callibration Record of instrument used for testing
(iii)	Please provide the moisture content in sold fuel (As Received Basis) in %			Lab Register on Fuel Testing for Proximate Analysis 2) Callibration Record of instrument used for testing
(iv)	Please provide the annual Biomass quantity purchased in tonnes.	Lot, Daily, Monthly, Yearly	Purchase Order 2) Stores Receipt 3) SAP Entry in MM/PP/FI module 4) Annual Report	1) Stores Receipt Register
(v)	Please provide the annual Fuels quantity consumed in power generation (CPP) in tonnes.	Hourly, Daily and	DPR 2) MPR 3) CPP Log Sheet 4) SAP Entry in MM/PP/FI module 5) Annual Report	1)Belt Weigher before Coal Bunker
(vi)	Please provide the annual Fuels quantity consumed in power generation (Cogen) in tonnes.	Hourly, Daily and	DPR 2) MPR 3) Cogen Log Sheet 4) SAP Entry in MM/PP/FI module 5) Annual Report	1)Belt Weigher before Coal Bunker
(vii)	Please provide the annual Fuels quantity consumed in process in tonnes.	Hourly, Daily and Monthly	1) DPR 2) MPR 3) Boiler/Digestor/Calciner/Process Log Sheet 4) SAP Entry in MM/PP/FI module 5) Annual Report	1) Belt Weigh Feeder 2) Solid Flow Meter
(viii)	Formula protected (Total sold fuel consumption in the power generation and process)			
(ix)	Formula protected (Equivalent thermal energy used in power generation (CPP))			
(x)	Formula protected (Equivalent thermal energy used in power generation(Cogen))			
(xi)	Formula protected (Equivalent thermal energy used in processing)			
C.7	Solid Waste (pl. specify and refer CPCB guidelines, enclosed) rubber tyres chips, Municipal Solid waste etc.			
(i)	Please provide landed cost of Fuel i.e. Basic Cost+All Taxes + Freight. The landed cost of last purchase order in the financial year	 •	Purchase Order for basic rates and taxes 2) Freight document for rates	

(ii)	Please provide the gross calorific value (As Fired Basis) of Fuel in kcal/kg.	Lot, Daily, Monthly, Quarterly Lot, Daily, Monthly, Quarterly	Daily Internal Report from Lab on Fuel Proximate Analysis performed on each lot. 2) Test Certificate from Government Accredited lab. (It is desirable that the plant may maintain minimum 4 sample test in a quarter for Proximate and Ultimate Analysis i.e. 16 test certificates in a year for each fuel) 3) Purchase Order, where guaranteed GCV range is mentioned 1) Daily Internal Report from Lab on Fuel Proximate Analysis performed on each lot. 2) Test Certificate from	1) Lab Register on Fuel Testing for Proximate Analysis 2) Callibration Record of instrument used for testing 1) Lab Register on Fuel Testing for Proximate Analysis 2) Callibration Record of instrument used for testing
(iii)	Please provide the moisture content in sold fuel (As Received Basis) in %		Government Accredited lab. (It is desirable that the plant may maintain minimum 4 sample test in a quarter for Proximate and Ultimate Analysis i.e. 16 test certificates in a year for each fuel) 3) Purchase Order, where guaranteed moisture % range is mentioned	
(iv)	Please provide the annual Solid waste quantity purchased in tonnes.	Lot, Daily, Monthly, Yearly	1) Purchase Order 2) Stores Receipt 3) SAP Entry in MM/PP/FI module 4) Annual Report	1) Stores Receipt Register
(v)	Please provide the annual Fuels quantity consumed in power generation(CPP) in tonnes.	Hourly, Daily and Monthly	1) DPR 2) MPR 3) CPP Log Sheet 4) SAP Entry in MM/PP/FI module 5) Annual Report	1)Belt Weigher before Coal Bunker
(vi)	Please provide the annual Fuels quantity consumed in power generation(Cogen) in tonnes.	Hourly, Daily and Monthly	1) DPR 2) MPR 3) Cogen Log Sheet 4) SAP Entry in MM/PP/FI module 5) Annual Report	1)Belt Weigher before Coal Bunker
(vii)	Please provide the annual Fuels quantity consumed in process in tonnes.	Hourly, Daily and Monthly	1) DPR 2) MPR 3) Boiler/Digestor/Calciner/Process Log Sheet 4) SAP Entry in MM/PP/FI module 5) Annual Report	1) Belt Weigh Feeder 2) Solid Flow Meter
(viii)	Formula protected (Total Waste consumption in the power generation and process)			
(ix)	Formula protected (Equivalent thermal energy used in power generation) CPP			
(x)	Formula protected (Equivalent thermal energy used in power generation) Cogen			
(xi)	Formula protected (Equivalent thermal energy used in processing)			
C.8	Formula protected [Total solid fuel (indian coal, petcoke, imported coal, lignite and biomass) thermal energy used in power generation (CPP)			
C.9	Formula protected [Total solid fuel (indian coal, petcoke, imported coal, lignite and biomass) thermal energy used in power generation			
C.10	(Cogen)] Formula protected [Total solid fuel (indian coal, petcoke, imported coal and lignite) thermal energy used in processing]			
D	Liquid Fuel Consumption			
D.1	Furnace Oil			
(i)	Please provide landed cost of Furnace Oil i.e. Basic Cost+All Taxes + Freight. The landed cost of last purchase order in the financial year	 Annual	Purchase Order for basic rates and taxes 2) Freight document for rates	
(ii)	Please provide the gross calorific value of furnace oil in kcal/kg.	Lot, Montly, Yearly	Test report from Supplier 2) Internal Test Report from lab 3) Test report from Government Accridited Lab 4) Standard Value as per Notification	Lab Register
(iii)	Please provide the annual furnace oil quantity purchase in kilo liters.	Lot, Montly, Yearly	Purchase Order 2) Stores Receipt 3) SAP Entry in MM/PP/FI module 4) Annual Report	Stores Receipt

			1	1
(iv)	Please provide the density of furnace oil in kg/lit.	Lot, Montly, Yearly	Test report from Supplier 2) Internal Test Report from lab 3) Test report from Government Accridited Lab 4) Standard Value as per Notification	Lab Register
(v)	Please provide the furnace oil quantity consumed in DG set for power generation in kilo liters.	Daily, Monthly, Yearly	Daily Generation Report 2) Monthly Generation Report 3) DG Log Sheet 4) SAP Entry in MM/PP/FI module 5) Annual Report	Flow Meter, Dip measurement in day tank
(vi)	Please provide the furnace oil quantity consumed in CPP for power generation in kilo liters.	Daily, Monthly, Yearly	Daily Generation Report 2) Monthly Generation Report 3) CPP Log Sheet 4) SAP Entry in MM/PP/FI module 5) Annual Report	Flow Meter, Dip measurement in day tank
(vii)	Please provide the furnace oil quantity consumed in Cogen for power generation in kilo liters.	Daily, Monthly, Yearly	DPR 2) MPR 3) Cogen Log Sheet 4) SAP Entry in MM/PP/FI module 5) Annual Report	Flow Meter, Dip measurement in day tank
(viii)	Please provide the furnace oil quantity used in process heating in kilo liters.	Daily, Monthly, Yearly	DPR 2) MPR 3) Boiler/Digestor/Calciner/Carbon Anode Process Log Sheet 4) SAP Entry in MM/PP/FI module 5) Annual Report/ Cast House Log Sheet	Flow Meter, Dip measurement in day tank
(ix)	Formula protected (Total furnace oil used in DG, CPP, Cogen and process heating multiply by the density)			
(x)	Formula protected (Total furnace oil thermal energy used in DG set)			
(xi)	Formula protected (Total furnace oil thermal energy used in CPP)			
(xii)	Formula protected (Total furnace oil thermal energy used in Cogen)			
(xiii)	Formula protected (Total furnace oil thermal energy used in Process Heating)			
D.2/D.3	LSHS/HSHS			
(i)	Please provide landed cost of Liquid Fuel i.e. Basic Cost+All Taxes + Freight. The landed cost of last purchase order in the financial year	Annual	Purchase Order for basic rates and taxes 2) Freight document for rates	
(ii)	Please provide the gross calorific value of LSHS/HSHS in kcal/kg.	Lot, Montly, Yearly	Test report from Supplier 2) Internal Test Report from lab 3) Test report from Government Accridited Lab 4) Standard Value as per Notification	Lab Register
(iii)	Please provide the annual LSHS/HSHS quantity purchase in Tonnes.	Lot, Montly, Yearly	Purchase Order 2) Stores Receipt 3) SAP Entry in MM/PP/FI module 4) Annual Report	Stores Receipt
(iv)	Please provide the LSHS/HSHS quantity consumed in DG set for power generation in Tonnes.	Daily, Monthly, Yearly	Daily Generation Report 2) Monthly Generation Report 3) DG Log Sheet 4) SAP Entry in MM/PP/FI module 5) Annual Report	Flow Meter, Dip measurement in day tank
(v)	Please provide the LSHS/HSHS quantity consumed in CPP for power generation in Tonnes.	Daily, Monthly, Yearly	Daily Generation Report 2) Monthly Generation Report 3) CPP Log Sheet 4) SAP Entry in MM/PP/FI Annual Deport 3	Flow Meter, Dip measurement in day tank
	<u> </u>		module 5) Annual Report	
(vi)	Please provide the LSHS/HSHS quantity consumed in Cogen for power generation in Tonnes.	Daily, Monthly, Yearly	Inducie 5) Annual Report 1) Daily Generation Report 2) Monthly Generation Report 3) Cogen Log Sheet 4) SAP Entry in MM/PP/FI module 5) Annual Report	Flow Meter, Dip measurement in day tank
(vi)		Daily, Monthly, Yearly Daily, Monthly, Yearly	Daily Generation Report 2) Monthly Generation Report 3) Cogen Log Sheet 4) SAP Entry in MM/PP/FI	Flow Meter, Dip measurement in day tank Flow Meter, Dip measurement in day tank
	generation in Tonnes.		Daily Generation Report 2) Monthly Generation Report 3) Cogen Log Sheet 4) SAP Entry in MM/PP/FI module 5) Annual Report 1) DPR 2) MPR 3) Boiler/Digestor/Calciner/Carbon Anode Process Log Sheet 4) SAP Entry in MM/PP/FI	
(vii)	generation in Tonnes. Please provide the LSHS/HSHS quantity consumed in process heating. Formula protected (Total LSHS/HSHS used in DG, CPP and process		Daily Generation Report 2) Monthly Generation Report 3) Cogen Log Sheet 4) SAP Entry in MM/PP/FI module 5) Annual Report 1) DPR 2) MPR 3) Boiler/Digestor/Calciner/Carbon Anode Process Log Sheet 4) SAP Entry in MM/PP/FI	
(vii)	generation in Tonnes. Please provide the LSHS/HSHS quantity consumed in process heating. Formula protected (Total LSHS/HSHS used in DG, CPP and process heating)		Daily Generation Report 2) Monthly Generation Report 3) Cogen Log Sheet 4) SAP Entry in MM/PP/FI module 5) Annual Report 1) DPR 2) MPR 3) Boiler/Digestor/Calciner/Carbon Anode Process Log Sheet 4) SAP Entry in MM/PP/FI	

(xi)	Formula protected (Total LSHS/HSHS thermal energy used in Cogen)			
(xii)	Formula protected (Total LSHS/HSHS thermal energy used in Process Heating)			
D.4/D.5	High Speed Diesel (HSD)/ Light Diesel Oil (LDO)			
0.4/0.3		Annual	1) Purchase Order for basic rates and taxes 2) Freight	
(i)	Please provide landed cost of HSD/LDO anded cost of last purchase order in the financial year		document for rates	
(ii)	Please provide the gross calorific value of HSD/LDO in kcal/kg.	Lot, Montly, Yearly	Test report from Supplier 2) Internal Test Report from lab 3) Test report from Government Accridited Lab 4) Standard Value as per Notification	Lab Register
(iii)	Please provide the annual HSD/LDO quantity purchase in kilo liters.	Lot, Montly, Yearly	Purchase Order 2) Stores Receipt 3) SAP Entry in MM/PP/FI module 4) Annual Report	Stores Receipt
(iv)	Please provide the density of HSD/LDO in kg/lit.	Lot, Montly, Yearly	Test report from Supplier 2) Internal Test Report from lab 3) Test report from Government Accridited Lab 4) Standard Value as per Notification	Lab Register
(v)	Please provide the HSD/LDO quantity consumed in DG set for power generation in kilo liters.	Daily, Monthly, Yearly	Daily Generation Report 2) Monthly Generation Report 3) DG Log Sheet 4) SAP Entry in MM/PP/FI module 5) Annual Report	Flow Meter, Dip measurement in day tank
(vi)	Please provide the HSD/LDO quantity consumed in CPP for power generation in kilo liters.	Daily, Monthly, Yearly	Daily Generation Report 2) Monthly Generation Report 3) CPP Log Sheet 4) SAP Entry in MM/PP/FI module 5) Annual Report	Flow Meter, Dip measurement in day tank
(vii)	Please provide the HSD/LDO quantity consumed in Cogen for power generation in kilo liters.	Daily, Monthly, Yearly	Daily Generation Report 2) Monthly Generation Report 3) Cogen Log Sheet 4) SAP Entry in MM/PP/FI module 5) Annual Report	Flow Meter, Dip measurement in day tank
(viii)	Please provide the HSD/LDO quantity used in Transportation, if any in kilo liters.	Daily, Monthly, Yearly	1)Vehicle Log book 2) Stores Receipt 3) Fuel Dispenser meter reading 3) Work Order for Internal Transportation	
(ix)	Please provide the HSD/LDO quantity used in process heating in kilo liters.	Daily, Monthly, Yearly	DPR 2) MPR 3) Boiler/Digestor/Calciner/Carbon Anode Process Log Sheet 4) SAP Entry in MM/PP/FI module 5) Annual Report/ Cast House Log Sheet	Flow Meter, Dip measurement in day tank
(x)	Formula protected (Total HSD/LDO used in DG, CPP and process heating multiply by the density)			
(xi)	Formula protected (Total HSD/LDO thermal energy used in DG set)			
(xii)	Formula protected (Total HSD/LDO thermal energy used in CPP)			
(xiii)	Formula protected (Total HSD/LDO thermal energy used in Cogen)			
(xiv)	Formula protected (Total HSD/LDO thermal energy used in Process Heating)			
D.6	Liquid Waste (pl. specify and refer CPCB guidelines, enclosed)			
(i)	Please provide landed cost of Liquid Waste i.e. Basic Cost+All Taxes + Freight. The landed cost of last purchase order in the financial year	Annual	1) Purchase Order for basic rates and taxes 2) Freight document for rates	
(ii)	Please provide the gross calorific value of liquid waste in kcal/kg.	Lot, Montly, Yearly	Test report from Supplier 2) Internal Test Report from lab 3) Test report from Government Accridited Lab 4) Standard Value as per Notification	Lab Register
(iii)	Please provide the annual liquid waste quantity purchase in kilo liters.	Lot, Montly, Yearly	Purchase Order 2) Stores Receipt 3) SAP Entry in MM/PP/FI module 4) Annual Report	Stores Receipt

			In	T
		Lot, Montly, Yearly	1) Test report from Supplier 2) Internal Test Report	Lab Register
(iv)	Please provide the average density of liquid waste in kg/lit.		from lab 3) Test report from Government Accridited	
(10)	ricuse provide the average density of liquid waste in kg/lit.		Lab 4) Standard Value as per Notification	
	Please provide the liquid waste quantity consumed in DG set for power	Daily, Monthly, Yearly	1) Daily Generation Report 2) Monthly Generation	Flow Meter, Dip measurement in day tank
(v)	generation in kilo liters.		Report 3) DG Log Sheet 4) SAP Entry in MM/PP/FI	
	generation in kilo liters.		module 5) Annual Report	
	Diagram and the limit was a section of the control	Daily, Monthly, Yearly	1) Daily Generation Report 2) Monthly Generation	Flow Meter, Dip measurement in day tank
(vi)	Please provide the liquid waste quantity consumed in CPP for power		Report 3) CPP Log Sheet 4) SAP Entry in MM/PP/FI	
	generation in kilo liters.		module 5) Annual Report	
		Daily, Monthly, Yearly	1) Daily Generation Report 2) Monthly Generation	Flow Meter, Dip measurement in day tank
(vii)	Please provide the liquid waste quantity consumed in Cogen for power		Report 3) Cogen Log Sheet 4) SAP Entry in MM/PP/FI	,
, ,	generation in kilo liters.		module 5) Annual Report	
		Daily, Monthly, Yearly	1) DPR 2) MPR 3) Boiler/Digestor/Calciner/Carbon	Flow Meter, Dip measurement in day tank
		, , , , , , , ,	Anode Process Log Sheet 4) SAP Entry in MM/PP/FI	, , , ,
(viii)	Please provide the liquid waste quantity consumed in process heating		module 5) Annual Report/ Cast House Log Sheet	
, ,	in kilo liters.			
	Formula protected (Total liquid waste used in DG, CPP and process			
(ix)	heating multiply by the density)			
(x)	Formula protected (Total liquid waste thermal energy used in DG set)			
(xi)	Formula protected (Total liquid waste thermal energy used in CPP)			
(A1)	Tormula protected (Total liquid waste thermal energy used in CFF)			
(xii)	Formula protected (Total liquid waste thermal energy used in Cogen)			
(AII)	Tormula protected (Total liquid waste thermal energy used in cogen)			
(xiii)	Formula protected (Total liquid waste thermal energy used in Process			
(2017)	Heating)			
	Formula protected [Total liquid fuel (furnace oil, LSHS, HSHS, HSD and			
D.7	LDO) thermal energy used in DG set for power generation]			
	EDO) thermal energy used in DO section power generation;			
	Formula protected [Total liquid fuel (furnace oil, LSHS, HSHS, HSD and			
D.8	LDO) thermal energy used in CPP for power generation]			
	LDO) thermal energy used in CFF for power generation			
	Formula protected [Total liquid fuel (furnace oil, LSHS, HSHS, HSD and			
D.9	LDO) thermal energy used in Cogen for power generation]			
	LDO) thermal energy used in Cogen for power generation			
D.10	Formula protected [Total liquid fuel (furnace oil, LSHS, HSHS, HSD and			
D.10	LDO) thermal energy used in process heating]			
E	Gaseous Fuel			
E.1	Compressed Natural Gas (CNG/NG/PNG/LNG)			
		Annual	1) Purchase Order for basic rates and taxes 2) Freight	
(i)	Please provide landed cost of Gaseous Fuel i.e. Basic Cost+All Taxes +		document for rates	
	Freight. The landed cost of last purchase order in the financial year			
		Lot, Dailiy, Monthly,	1) Test report from Supplier 2) Test report from	
(ii)		Yearly	Government Accridited Lab 3) Standard Value as per	
	Please provide the gross calorific value in kcal/SCM.		Notification	
(iii)		Lot, Dailiy, Monthly,	1) Purchase Order 2) Stores Receipt 3) SAP Entry in	Gas Meter Reading, Bullet Pressure Reading
(''')	Please provide the annual quantity purchase in million SCM.	Yearly	MM/PP/FI module 4) Annual Report	
(iv)	Please provide the NG quantity consumed in power generation in	Daily, Monthly, Yearly	1) DPR 2) MPR 3) GG Log Sheet 4) SAP Entry in	Gas Meter Reading, Bullet Pressure Reading
(14)	million SCM.		MM/PP/FI module 5) Annual Report	
		Daily, Monthly, Yearly	1)Vehicle Log book 2) Stores Receipt 3) Fuel Dispenser	
(v)	Please provide the NG quantity consumed in transportation in million		meter reading 3) Work Order for Internal	
1	SCM.		Transportation	

(vi)	Please provide the NG quantity consumed in process heating million		Daily, Monthly, Yearly	DPR 2) MPR 3) Boiler/Digestor/Calciner/Carbon Anode Process Log Sheet 4) SAP Entry in MM/PP/FI module 5) Annual Report/ Cast House Log Sheet	Gas Meter Reading, Bullet Pressure Reading
(vii)	SCM Formula protected (Total NG used in power generation and process				
(vii)	heating) Formula protected (Total NG thermal energy used in power				
(viii)	generation) Formula protected (Total NG thermal energy used in Process				
(ix)	Heating)				
E 2	Liquefied Petroleum Gas (LPG)				
E.2	Liqueneu ren viedili das (LFG)		Annual	Purchase Order for basic rates and taxes 2) Freight	
(i)	Please provide landed cost of LPG i.e. Basic Cost+All Taxes + Freight. The landed cost of last purchase order in the financial year			document for rates	
(:-)				1) Test report from Supplier 2) Test report from	
(ii)	Please provide the gross calorific value of LPG in kcal/SCM		Yearly	Government Accridited Lab 3) Standard Value as per Notification	
(iii)	Please provide the annual LPG quantity purchase in million SCM		Lot, Dailiy, Monthly, Yearly	Purchase Order 2) Stores Receipt 3) SAP Entry in MM/PP/FI module 4) Annual Report	Gas Meter Reading, Bullet Pressure Reading
(iv)	Please provide the LPG quantity consumed in power generation in million SCM			1) DPR 2) MPR 3) GG Log Sheet 4) SAP Entry in MM/PP/FI module 5) Annual Report	Gas Meter Reading, Bullet Pressure Reading
(v)	Please provide the LPG quantity consumed in process heating million SCM		Daily, Monthly, Yearly	DPR 2) MPR 3) Boiler/Digestor/Calciner/Carbon Anode Process Log Sheet 4) SAP Entry in MM/PP/FI module 5) Annual Report/ Cast House Log Sheet	Gas Meter Reading, Bullet Pressure Reading
(vi)	Formula protected (Total LPG used in power generation and process heating)				
(vii)	Formula protected (Total LPG thermal energy used in power generation)				
(viii)	Formula protected (Total LPG thermal energy used in Process Heating)				
	Formula make to d (Total account fool the mode account of				
E.3	Formula protected [Total gaseous fuel thermal energy used in power generation]				
E.4	Formula protected [Total gaseous fuel thermal energy used in processing]				
F	Steam Import/Export				
	Steam Import Steam Import				
F.1.1/F.1.2	LP/HP Steam Import				
(i)	Please provide landed cost of Import Low Pressure/High Pressure Steam i.e. Basic Cost+All Taxes + Freight. The landed cost of last purchase order in the financial year		Annual	Purchase Order for basic rates and taxes 2) Freight document for rates	
(ii)		Enthalpy/Boiler Efficiency	Dailiy, Monthly, Yearly	1) SAP Entry in MM/PP/FI module	1) Boiler Efficiecny calculation
(iii)	Please provide the annual LP/HP Steam quantity purchase in Tonnes		Lot, Dailiy, Monthly, Yearly	1) Purchase Order 2) SAP Entry in MM/PP/FI module 3) Annual Report	Steam Flow Meter Reading, Pressure Reading, Temperature Reading
(iv)	Please provide the annual average temperature of imported LP/HP Steam in oC			1) SAP Entry in MM/PP/FI module	Steam Flow Meter Reading, Pressure Reading, Temperature Reading
(v)	Please provide the annual average pressure of imported LP/HP Steam in bar		Daily, Monthly, Yearly	1) SAP Entry in MM/PP/FI module	Steam Flow Meter Reading, Pressure Reading, Temperature Reading
(vi)	Formula protected (Total LP/HP steam imported for processing)				
F.1.3	Formula protected (Total energy imported by LP & HP Steam for processing)				

F.2	Steam export				
F.2.1/F.2.2	LP/HP Steam export				
(i)	Please provide landed cost of Exported Low Pressure/High Pressure Steam i.e. Basic Cost+All Taxes + Freight. The landed cost of last purchase order in the financial year		Annual	Purchase Order for basic rates and taxes 2) Freight document for rates	
(ii)	Please provide the enthalpy of exported LP/HP Steam in kcal/kg		Dailiy, Monthly, Yearly	1) SAP Entry in MM/PP/FI module	
(iii)	Please provide the annual quantity exported of LP/HP Steam in Tonnes		Lot, Dailiy, Monthly, Yearly	Annual Report	Steam Flow Meter Reading, Pressure Reading, Temperature Reading
(iv)	Please provide the annual average temperature of exported LP/HP Steam in oC		Daily, Monthly, Yearly	1) SAP Entry in MM/PP/FI module	Steam Flow Meter Reading, Pressure Reading, Temperature Reading
(v)	Please provide the annual average pressure of exported LP/HP Steam in bar		Daily, Monthly, Yearly	1) SAP Entry in MM/PP/FI module	Steam Flow Meter Reading, Pressure Reading, Temperature Reading
(vi)	Formula protected (Total LP/HP steam exported for processing)				
F.2.3	Formula protected (Total energy exported by LP & HP Steam)				
F.3	Formula protected (Weighted Average Boiler Efficiecny (Boiler 1-10))				
F.4	Formula protected (Total Thermal Energy Exported for Steam)				
F.5	Formula protected (Total Thermal Energy for Steam (Import-Export))				
G	Total Thermal Energy Formula protected [Total thermal energy of all input fuels (Solid,				
G.1	Liquid and Gaseous) used in power generation]				
G.2	Formula protected [Total thermal energy of all input fuels (Solid, Liquid and Gaseous) used in process heating]				
G.3	Formula protected [Total thermal energy of all input fuels (Solid, Liquid and Gaseous) used in power generation and process heating]				
Н	Gross Heat Rate Formula protected (Gross heat rate of DG set = Total thermal energy				
H.1	used in DG set/ Total annual generation of DG set)				
H.2	Formula protected (Gross heat rate of Steam Turbine = Total thermal energy used in Steam Turbine / Total annual generation of Steam Turbine)				
Н.3	Formula protected (Gross heat rate of Gas Turbine = Total thermal energy used in Gas Turbine / Total annual generation of Gas Turbine)				
H.4	Formula Protected (Gross Heat Rate of Co-Gen (Extraction cum Condensing))				
H.5	Formula Protected (Gross Heat Rate of Co- Gen(Extraction/BackPressure))				
Н.6	Formula protected (Weighted Heat Rate of plant)				
ļ.,	Cool Quality to COD (As Flord Boots)				
1.1	Coal Quality in CPP (As Fired Basis)		Lat Daile Manatel	4) Daily Internal Department from Labour Evel C	4) Lab Basistan an Fraktisa fan Basisaata (* 1. 2)
I.1 I.2	Please provide the GCV value of coal used in CPP Please provide the Ash % in coal used in CPP	Location of sampling and Fuel	Lot, Daily, Monthly,		1) Lab Register on Fuel Testing for Proximate Analysis 2)
1.2	Please provide the Ash % in coal used in CPP Please provide the Hydrogen % in coal used in CPP	consumption for AS FIRED Fuel	Quarterly		Callibration Record of instrument used for testing 3) Lab
1.3	Please provide the Hydrogen % in coal used in CPP Please provide the Moisture % in coal used in CPP	analysis: After the Mill		Government Accredited lab. (Plant to maintain minimum 1 sample test in a quarter for Proximate and	register 4) Lab analysis prcedure documents 5) Sampling methodology document
J	Bauxite Quality				
i				1) Log Sheet 2) CCR SCADA Report/ Ternds 3) DPR 4) MPR 5) SAP Entry in PP/SD module 6) Shift Register 7)	1) Weigh Feeder 2) Weigh Bridge
	Please provide total Bauxite Consumed for alumina production in Tones			Log Book	

			1	I.v	T
				1) Log Sheet 2) CCR SCADA Report/ Ternds 3) DPR 4)	
ii	Please provide type of Bauxite consumed in plant			MPR 5) SAP Entry in PP/SD module 6) Shift Register 7)	
				Log Book	
iii	Please provide precentage of total Al2O3 /siO2 Ratio in bauxite			1) Calculation Sheet	
	<u> </u>		Daily, Monthly	1) Log Sheet 2) CCR SCADA Report/ Ternds 3) DPR 4)	1) Test Report 2) Lab Register 3) Callibration Record of the
iv	Please provide precentage of Total Available Alumina (TAA) in bauxite			MPR 5) SAP Entry in PP/SD module 6) Shift Register 7)	instrument used for testing
				Log Book	-
			Daily, Monthly	1) Log Sheet 2) CCR SCADA Report/ Ternds 3) DPR 4)	1) Test Report 2) Lab Register 3) Callibration Record of the
v	Please provide precentage of Monohydrate Alumina (MHA) in Bauxite			MPR 5) SAP Entry in PP/SD module 6) Shift Register 7)	instrument used for testing
				Log Book	
			Daily, Monthly	1) Log Sheet 2) CCR SCADA Report/ Ternds 3) DPR 4)	1) Test Report 2) Lab Register 3) Callibration Record of the
vi	Please provide precentage of Trihydrate Alumina (THA) in Bauxite			MPR 5) SAP Entry in PP/SD module 6) Shift Register 7)	instrument used for testing
	rease provide precentage or rimyarate riamina (1711) in basiste			Log Book	mistrament asea for testing
			Daily, Monthly	1) Log Sheet 2) CCR SCADA Report/ Ternds 3) DPR 4)	1) Test Report 2) Lab Register 3) Callibration Record of the
vii	Please provide precentage of Silica in Bauxite		Daily, Wioritiny	MPR 5) SAP Entry in PP/SD module 6) Shift Register 7)	instrument used for testing
V	i rease provide precentage of sinca in badante			Log Book	mistrument used for testing
			Daily, Monthly	1) Log Sheet 2) CCR SCADA Report/ Ternds 3) DPR 4)	1) Test Report 2) Lab Register 3) Callibration Record of the
viii	Please provide precentage of Moisture in Bauxite		Dany, Monthly	MPR 5) SAP Entry in PP/SD module 6) Shift Register 7)	instrument used for testing
VIII	riedse provide precentage or iviolsture in bauxite				mistrament used for testing
			Daily Manthly	Log Book	1) Tost Banart 2) Lab Basistar 2) Callibration Bass - Lafetha
1	Please provide presentage of Overell Deserver		Daily, Monthly	1) Log Sheet 2) CCR SCADA Report/ Ternds 3) DPR 4)	1) Test Report 2) Lab Register 3) Callibration Record of the
ix	Please provide precentage of Overall Recovery			MPR 5) SAP Entry in PP/SD module 6) Shift Register 7)	instrument used for testing
			Daile Manadale	Log Book	4) Test Bound 2) Leb Besister 2) Cellibration 2
			Daily, Monthly	1) Log Sheet 2) CCR SCADA Report/ Ternds 3) DPR 4)	1) Test Report 2) Lab Register 3) Callibration Record of the
х	Please provide Wash Water in tonne of water /tonne of bauxite			MPR 5) SAP Entry in PP/SD module 6) Shift Register 7)	instrument used for testing
				Log Book	
			Daily, Monthly	1) Log Sheet 2) CCR SCADA Report/ Ternds 3) DPR 4)	1) Test Report 2) Lab Register 3) Callibration Record of the
xi	please provide Steam Economy in tonne of steam/tonne of bauxite			MPR 5) SAP Entry in PP/SD module 6) Shift Register 7)	instrument used for testing
				Log Book	
			Daily, Monthly	1) Log Sheet 2) CCR SCADA Report/ Ternds 3) DPR 4)	1) Test Report 2) Lab Register 3) Callibration Record of the
xii	Please provide precentage of Fe in Bauxite			MPR 5) SAP Entry in PP/SD module 6) Shift Register 7)	instrument used for testing
				Log Book	
			Daily, Monthly	1) Log Sheet 2) CCR SCADA Report/ Ternds 3) DPR 4)	1) Test Report 2) Lab Register 3) Callibration Record of the
xiii	Please provide precentage of Fe in Mud			MPR 5) SAP Entry in PP/SD module 6) Shift Register 7)	instrument used for testing
				Log Book	
xiv	Formula protected enthalpy of steam in kcal/kg				
XV	Formula protected ofBoiler Efficiency in %				
K	Miscelleneous Data				
К1	Additional Equipment installation after baseline year due to				
KI	Environmental Concern				
		List of Equipment to be filled up	Daily, Monthly, Annual	Energy Meter Readings and Power consumpotion	1) EMS 2) Energy Meter 3) Addition Equipment List with
(:)	Please provide the Electrical Energy Consumption with list of additional			details of each additional equipment installed from 1st	capacity and running load 4) Purchase Order document 5)
(i)	Equipment installed due to Environmental Concern after baseline year			Apr to 31st March	SAP Data in MM module
	in Sheet! Addl Eqp List-Env.				
		List of Equipment to be filled up	Daily, Monthly, Annual	Solid/Liquid/Gaseous Fuel consumption of each	1) Fuel Flow Meter 2) Weigh Feeder 3) Purchase Order
(ii)	Please provide the Thermal Energy Consumption with list of additional			additional equipment installed from 1st Apr to 31st	document 4) SAP Data in MM module
	Equipment installed due to Environmental Concern after baseline year.			March	
1/2					
K2	Biomass/ Alternate Fuel availability (as per Sr. No D.9/D.10/E.6)				
	1, 1	Fossil Fuel: Coal/Lignite/Fuel Oil	Monthly	1) Authentic Document in relation to Bio-	
	Please provide the details of repalcement of Bio-mass with fossil fuel	, 0	<u>'</u>	Mass/Alternate Solid Fuel/Alternate Liquid Fuel	
(i)	due to un-avaialability. This is required in fossil fuel tonnage in terms of			availability in the region. 2) Test Certificate of Bio-mass	
	equivalent GCV of Bio-mass (Used in Process)			from Government Accredited Lab for GCV in Baseline	
			Monthly	and assessment year 3) Test Certificate of replaced	
	Please provide the details of repalcement of Alternate Solid Fuel with			Fossil Fuel GCV	
(ii)	fossil fuel due to un-avaialability. This is required in fossil fuel tonnage			I OSSII I UEI GCV	
	in terms of equivalent GCV of Alternate Solid Fuel (Used in Process)				
	in terms of equivalent Gev of Afternate Solid Lider (Osed III Flocess)		1	<u></u>	

			N. d ada da	1	
	Please provide the details of repalcement of Alternate Liquid Fuel with		Monthly		
(iii)	fossil fuel due to un-avaialability. This is required in fossil fuel tonnage				
	in terms of equivalent GCV of Alternate Liquid Fuel (Used in Process)				
К3	Project Activities (Construction Phase)				
K3	rioject Activities (Collstruction Filase)	List of Equipment to be filled up	Daily, Monthly	Energy Meter Readings of each project activity, with list	1) EMS 2) Energy Meter 3) Addition Equipment List with
	Please provide the Electrical Energy Consumption with list of Project	List of Equipment to be filled up	Daily, MOHUITY		capacity and running load 3) Purchase Order document 4)
(i)	Activites and energy consumed during project activities treated as			to 31st March	SAP Data in MM module
	Construction phase in Lakh kwh			TO 313C IVIGICII	DAT Data in will inloudie
	Construction phase in Lakin kwii	List of Equipment to be filled up	Daily, Monthly	Solid/Liquid/Gaseous Fuel consumption of each project	Fuel Flow Meter 2) Weigh Feeder 3) Purchase Order
	Please provide the Thermal Energy Consumption with list of Project	List of Equipment to be filled up	Dan,, Monding	activity with list of equipment under each activity	document 4) SAP Data in MM module
(ii)	Activites and energy consumed during project activities treated as			installed from 1st Apr to 31st March	document if one bata in with module
	Construction phase in Million kcal converted from different fuel			The state of the s	
К4	New Line/Unit Commissioning				
	·		Daily, Monthly	1) Rated Capacity of new Process/line from OEM 2)	1) EMS 2) Energy Meter 3) Addition Equipment List with
			,,	Energy Meter Readings and Power Consumption	capacity and running load
(i)				record of process/line with list of equipment installed	_
	Please provide the electrical energy consumed in Lakh kWh during its			from 1st Apr to 31st March	
	commissioning till it attains 70% of the new line capacity utilisation				
			Daily, Monthly	1) Rated Capacity of new Process/line from OEM 2)	1) Fuel Flow Meter 2) Weigh Feeder
	Please provide the thermal energy consumed in Million kcal during its			Thermal Energy Consumption record with list of	
(ii)	commissioning till it attains 70% of the new line capacity utilisation. The			equipment from DPR/Log book/SAP Entry in PP	
	energy is calculated after converting from the different fuel GCV used			module	
	in the new process/line				
	Please provide the Calcined Alumina production line (Refinery) during		Daily, Monthly	1) Rated Capacity of new Process/line from OEM 2)	1) Bauxite Weigh Feeder
(iii)	its commissioning up to 70% of new line/process capacity utilisation in			Production record from DPR/Log book/SAP Entry in PP	
	Tonnes			module	
	Please provide the Molten Aluminium production line (Smelter &		Daily, Monthly	1) Rated Capacity of new Process/line from OEM 2)	1) Alumina Weigh Feeder
(iv)	Integrated) during its commissioning up to 70% of new line/process			Production record from DPR/Log book/SAP Entry in PP	
	capacity utilisation in Tonnes			module	On a rata via Chift Dagistar
(v)	Please provide the date of achieving 70% capacity utilisation of new process/line			1) Record/Document from SAP Entry/Log Book Entry/DPR/MPR	Operator's Shift Register
	processy mile		Daily, Monthly	1) Rated Capacity of new unit from OEM 2) Energy	1) EMS 2) Energy Meter 3) Addition Equipment List with
			Daily, MOHUITY	, , ,	capacity and running load
(vi)	Please provide the Electrical Energy consumed in Lakh kWh from			from external source with list of equipment installed	capacity and raining load
(,	external source during its commissioning till it attains 70% of the new			from 1st Apr to 31st March	
	unit capacity utilisation in Power generation				
			Daily, Monthly	1) Rated Capacity of new unit from OEM 2) Thermal	1) Fuel Flow Meter 2) Weigh Feeder
	Please provide the thermal energy consumed in Million kcal during its			Energy Consumption record with list of equipment	, ,
(vii)	commissioning till it attains 70% of the new unit capacity utilisation.			from DPR/Log book/SAP Entry	
1	The energy is calculated after converting from the different fuel GCV			,	
	used in the new unit in Power generation				
(viii)	Please provide the Steam Generation From Co-Gen till New Line /Unit		Daily, Monthly	1) Record/Document from SAP Entry/Log Book	1) Fuel Flow Meter 2) Weigh Feeder
(****)	attains 70% of Capacity Utilisation			Entry/DPR/MPR	
(ix)	Please provide Net Electricity Genration till new line/ Unit attains 70%		Daily, Monthly	1) Record/Document from SAP Entry/Log Book	1) EMS 2) Energy Meter
(,,,,	Capacity Utilisation from CPP/Cogen			Entry/DPR/MPR	
(x)	Please provide the date of achieving 70% capacity utilisation of new			1) Record/Document from SAP Entry/Log Book	
	unit in Power generation			Entry/DPR/MPR	
К5	Unforeseen Circumstances			1001	4) 5145 0) 5
		Unforeseen Circumstances: Situation not		1) Relevent document on Unforeseen Circumstances	1) EMS 2) Energy Meter 3) Addition Equipment List with
(1)	Diagon provide the Flootrical Francy Consumption with 11-t -f	under direct or indirect control of pLant		beyond the control of plant 2) Energy Meter Readings	capacity and running load
(i)	Please provide the Electrical Energy Consumption with list of	management		and Power Consumption during the said period of	
1	unforeseen circumstances consumed in Lakh kWh claimed for			unforeseen circumstances	
	Normalisation			1) Relevant document on Unforeseen Circumstances	4) Fuel Flour Motor 2) Weigh Fooder
(ii)				,	1) Fuel Flow Meter 2) Weigh Feeder
				beyond the control of plant 2) Thermal Energy	
	Please provide the Thormal Energy Consumption with list of conference			Consumption record during the said period of	
	Please provide the Thermal Energy Consumption with list of unforeseen circumstances consumed in Million kcal claimed for Normalisation			unforeseen circumstances from DPR/Log book/SAP	
	circumstances consumed in Million Kcar claimed for Normalisation			Entry	

			1	T	
	Documentation for Normalisation				
L	. ,			d) For Normalization fortane which become annihable	
(i)	Bauxite Quality Normalisation			For Normalisation factors, which became applicable due to external factors, authentic documents to be	
(ii)	Please select from drop down list on availability of documents for			produced by DC for the baseline as well for the	
	Smelter Capacity Utilization Normalisation			assessment year. In absence of these authentic	
(iii)	Please select from drop down list on availability of documents for Fuel			documents, no Normalisation Factor will be	
(111)	Quality in CPP & Co-Gen Normalisation			applied/Considered. 2) While selecting "No" from the	
	Please select from drop down list on availability of documents for CPP			drop down list, the inbuilt calculation automatic treat	
(iv)	PLF Normalisation			the Normalisation for particular factor as zero.	
	Please select from drop down list on availability of documents for			However, DC needs to submit an undertaking from the	
(v)	Power Mix Normalisation			Authorised Signatory on non-availability of document	
(vii)	Please select from drop down list on availability of documents for				
(VII)	Product Mix Normalisation				
(viii)	Please select from drop down list on availability of documents for				
()	Carbon Anode Production Normalisation				
(ix)	Please select from drop down list on availability of documents for Other				
	Factos Normalisation				
М	Energy Saving and Investment				
	Please provide in Rs Million th year wise Investment made towards	Sum of three years 2012-15 for			
(i)	Energy saving Projects	Assessment year data entry			
(ii)	Thermal Energy Saving during the year	, , , , , , , , , , , , , , , , , , , ,			
. ,	<i>y y y</i>	Sum of three years 2012-15 for			
а	Solid Fuel	Assessment year data entry			
a.1	Please provide the Coal savings in Million kcal				
a.2	Please provide the Lignite savings in Million kcal				
a.3 a.4	Please provide the Petro Coke savings in Million kcal Please provide the Biomass waste savings in Million kcal				
	Please provide Liquid Fuel (FO/HSD/LDO/LSHS/HSHS) savings in	Sum of three years 2012-15 for			
b	million kcal	Assessment year data entry			
С	Please provide Gaseous Fuel savings in Million kcal	rissessment year data entry			
/:::\					
(iii)	Please provide the Electrical Energy savings in Million kcal				
N	Compulsory to attach yearwise Plant's Process Flow Diagram	-			
(i)					
* ' '	Please provide the PFD for baseline as well as for assessment year				
_	Document related to external factor				
(i)	Document related to external factor Market Demand				
(1)	Calcined Alumina stock record from Calciner Log book (Refinery)				
	2)SAP entry in SD and FI module 3) SAP entry in PP module 4)				
	Document related to sales impact of market				
(ii)	Grid Failure				
	1) SLDC Reference No. for planned Stoppages from respective				
	Substation 2) Log book record of Main Electrical Substation of Plant 3)				
	DPR 4) MPR 5) SAP entry in PM module of Electrical department				
(iii)	Raw Material un-availability				
	4) NA-A-ricl Onder control desired desired desired from Adia				
	1) Material Order copy and denial document from Mines owner 2) SAP				
(iv)	entry in MM/FI module on raw material order 3) DPR 4) MPR Natural Disaster				
(IV)	Supporting Authentic document from Local district Administration 2)				
	Kiln Log Sheet 3) Kiln operators Report book 4) DPR 5) MPR				
	208 Sheet Sy Mill Operators Report Book 4/ Dr R Sy WIFR				
(v)	Major change in government policy hampering plant's process system				
1.7	O O		l	i	

			I	
	1)Government Notification or Statutory order 2) Authentic document			
	from plant on effect of kiln production due to policy change 3) DPR 4)			
	MPR 5) SAP Entry on production change			
(vi)	Unforeseen circumstances/Labour Strike/Lockouts/Social Unrest/Riots			
(VI)	Omoreseen circumstances/ Labour Strike/ Lockouts/ Social Omest/ Mots			
	Relevent document on Unforeseen Circumstances beyond the			
	control of plant 2) Energy Meter Readings and Power Consumption			
	during the said period of unforeseen circumstances 3) Thermal Energy			
	Consumption record during the said period of unfreseen circumstances			
	from DPR/Log book/SAP Entry			
P	Note			
(i)	The hard copy/Printouts is to be signed by Authorised signatory, if SAP			
(1)	data is used as documents			
Q	Abbreviations			
MPR	Monthly Production Report			
DPR	Daily Production Report			
MM	Material Management			
PP	Production and Planning			
SD	Sales and Distribution			
FI	Financial Accounting	·		
PM	Plant Maintenance	·		
EMS	Energy Management System	·		