Maharashtra Pollution Control Board

महाराष्ट्र प्रदूषण नियंत्रण मंडळ

FORM V

Environmental Audit Report for the financial Year ending the 31st March 2016

Company Information

Company Name
Century Rayon

Application UAN number
NA

Address
P B. No. 22, Murbad Road

Plot no
45,53,56,57,58,59,76,77,78,201,202,207

Taluka
Ulhasnagar

Village
Shahad

Capital Investment (In lakhs)
19979

Scale
Large

City
Ulhasnagar

Pincode
421103

Person Name
Mr. O.R Chitlange

Designation
Sr. President

Telephone Number
02512733670

Fax Number
02512730064

Email
saluthra1@cenrayon.com

Region
SRO-Kalyan II

Industry Category
Red

Industry Type
R77 Synthetic fibers including rayon, tyre cord, polyester

Last Environmental statement submitted online
no

Consent Number
Formate1.0 / BO/CAC-Cell/ EIC No KN-6673-14/2nd CAC/ 6431 dated 30/05/2015

Consent Issue Date
30.05.2015

Consent Valid Upto
30.09.2019

Product Information

Product Name	***Consent Quantity***	***Actual Quantity***	***UOM***
Viscose Filament Yarn	25000	24978	MT/A
Sulphuric Acid	76000	73583	MT/A
Carbon-Di-Sulphide	20000	19341	MT/A

By-product Information

By Product Name	***Consent Quantity***	***Actual Quantity***	***UOM***
Sodium Sulphide	1870	1737	MT/A
Anhydrous Sodium Sulphate	16272	15895	MT/A

1) Water Consumption in m3/day

Water Consumption for	***Consent Quantity in m3/day***	***Actual Quantity in m3/day***
Process	13500	13375
Cooling	1500	1435
Domestic	4000	2868
All others	NA	NA
Total	19000	17677

1) Effluent Generation in CMD / MLD

Particulars	Consent Quantity	Actual Quantity	UOM
Effluent Water	13000	12850	CMD

2) Product Wise Process Water Consumption (cubic meter of process water per unit of product)

Name of Products (Production)	During the Previous financial Year	During the current Financial year	UOM
Viscose Filament Yarn	190.04	194.38	Ton/Ton
Sulphuric Acid	0.56	0.76	Ton/Ton
Carbon di Sulphide	5.97	4.14	Ton/Ton

3) Raw Material Consumption (Consumption of raw material per unit of product)

Name of Raw Materials	During the Previous financial Year	During the current Financial year	UOM
Rayon Wood Pulp	1.041	1.043	Ton/Ton
Rayon Caustic Soda	0.620	0.615	Ton/Ton
Rayon Carbondisulphide	0.283	0.280	Ton/Ton
Rayon Sulphuric Acid	0.913	0.897	Ton/Ton
Rayon Zinc	0.007	0.007	Ton/Ton
T/C Woodpulp	1.015	1.017	Ton/Ton
T/C Caustic Soda	0.687	0.694	Ton/Ton
T/C Carbondisulphide	0.318	0.316	Ton/Ton
T/C Sulphuric Acid	0.865	0.862	Ton/Ton
T/C Zinc	0.011	0.011	Ton/Ton
CSY Woodpulp	1.040	1.038	Ton/Ton
CSY Caustic Soda	0.638	0.644	Ton/Ton
CSY Carbondisulphide	0.281	0.280	Ton/Ton
CSY Sulphuric Acid	1.470	1.494	Ton/Ton
CSY Zinc	0.015	0.019	Ton/Ton
Sulphur in Sulphuric Acid plant	0.328	0.329	Ton/Ton
Sulphur in CS2 plant	0.913	0.916	Ton/Ton
Charcoal in CS2 plant	0.286	0.286	Ton/Ton

4) Fuel Consumption

Fuel Name	Consent quantity	Actual Quantity	UOM
Coal	97090	87087	MT/A
LSHS/FO	29200	94	MT/A

Pollution discharged to environment/unit of output (Parameter as specified in the consent issued)

[A] Water

Pollutants Detail	Quantity of Pollutants discharged (kL/day)	Concentration of Pollutants discharged(Mg/Lit) Except PH,Temp,Colour	Percentage of variation from prescribed standards with reasons		
	Quantity	Concentration	%variation	Standard	Reason
Suspended Solids	382.29	29.75	-	100 Mg/Lit	-

C.O.D	2098.79	163.33	-	250 Mg/Lit	-
B.O.D. (3 days at 27oC)	747.48	58.17	-	100 Mg/Lit	-
Oil & Grease	73.89	5.75	-	10 Mg/Lit	-
Zinc	26.09	2.03	-	5 Mg/Lit	-

[B] Air (Stack)

Pollutants Detail	***Quantity of Pollutants discharged (kL/day)***	***Concentration of Pollutants discharged(Mg/NM3)***	***Percentage of variation from prescribed standards with reasons***		
	Quantity	***Concentration***	***%variation***	***Standard***	***Reason***
i. CS2	10006	209	-	300 mg/Nm3	-
ii. H2S	1495	31.30	-	70 mg/Nm3	-
iii. SO2 from Coal Fired Boiler	2110	563	-	5320 Kg/D	-
iv. SO2 from Acid Plant	344.73	1197	-	3.5 Kg/T of sulfuric acid production	-
v. SOX from D G Set	-	-	-	-	-

HAZARDOUS WASTES

1) From Process

Hazardous Waste Type	***Total During Previous Financial year***	***Total During Current Financial year***	***UOM***
17.2 Spent catalyst	3.160	1.460	MT/A
0	195.170	137.180	MT/A
5.1 Used /spent oil	13.900	10.600	MT/A
5.2 Wastes/residue containing oil	5.844	4.200	MT/A

2) From Pollution Control Facilities

Hazardous Waste Type	***Total During Previous Financial year***	***Total During Current Financial year***	***UOM***
34.3 Chemical sludge from waste water treatment	1455.570	1250.784	MT/A

SOLID WASTES

1) From Process

Non Hazardous Waste Type	***Total During Previous Financial year***	***Total During Current Financial year***	***UOM***
Dry Viscose, Trash Sweeping Waste Cellulose from Rayon and T.C. plant, Civil debris & Burnt Charcoal	7212	7476	MT/A

2) From Pollution Control Facilities

Non Hazardous Waste Type	***Total During Previous Financial year***	***Total During Current Financial year***	***UOM***
Cinder Ash & Fly Ash	19233	20735	MT/A

3) Quantity Recycled or Re-utilized within the unit

Waste Type	***Total During Previous Financial year***	***Total During Current Financial year***	***UOM***
0	-	-	MT/A

Please specify the characteristics(in terms of concentration and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

1) Hazardous Waste

Type of Hazardous Waste Generated	Qty of Hazardous Waste	UOM	Concentration of Hazardous Waste
34.3 Chemical sludge from waste water treatment	1250.784	MT/A	NA, Disposal at CHWTSDF (MWML,Taloja)
17.2 Spent catalyst	1.460	MT/A	NA, Disposal at CHWTSDF (MWML,Taloja)
0	137.180	MT/A	NA, Disposal at CHWTSDF (MWML,Taloja)
5.1 Used /spent oil	10.600	MT/A	NA, Sale to Authorized Recycler
5.2 Wastes/residue containing oil	4.200	MT/A	NA, Sale to Authorized Recycler

2) Solid Waste

Type of Solid Waste Generated	Qty of Solid Waste	UOM	Concentration of Solid Waste
Trash, Sweeping, Waste Cellulose from Rayon & T.C., Civil Debris & De ased Charcoal	7476	MT/A	NA
Cinder Ash & Fly Ash	20735	MT/A	-

Impact of the pollution Control measures taken on conservation of natural resources and consequently on the cost of production.

Description	Reduction in Water Consumption (M3/day)	Reduction in Fuel & Solvent Consumption (KL/day)	Reduction in Raw Material (Kg)	Reduction in Power Consumption (KWH)	Capital Investment(in Lacs)	Reduction in Maintenance(in Lacs)
Replacing Cast Aluminium rotor with FRP blade rotor in Axial Flow fan in Air washer	-	-	-	963	12.80	-
Conversion from V Belt drives to flat belt drive in various Air Handling Units	-	-	-	92.64	4.18	-
Replacement of conventional 4*18 W FTL fittings by EE LED fittings	-	-	-	23.32	1.57	-
Optimization of Pot motor power consumption by Segregation of high Wattage motors on spinning machines	-	-	-	255	0.00	-
-Replacement of reciprocating Air compressor by screw compressor	-	-	-	217	14.70	-
Replacement of off load Transformer for CS2 furnace no. 9 with on load energy efficient	-	-	-	250	28.00	-
Installation of LP Turbine	-	12600	-	-	38.00	-
Replacement of TC Raw acid pumps by energy efficient and lower rating motor – 4 nos.	-	-	-	-	-	-
CSY machine old rolls motor, modified rewinding for energy saving.	-	-	-	-	-	-
VFD for Filter water pump no 1 & 2 in spinbath	-	-	-	-	-	-

Additional measures/investment proposal for environmental protection abatement of pollution, prevention of pollution.

[A] Investment made during the period of Environmental Statement

Detail of measures for Environmental Protection	*Environmental Protection Measures*	*Capital Investment (Lacks)*
Optimization of spinning exhausts fan power by putting VFO's in Rayon Plant.	Energy Saving	7.81
Replacement of air end of screw compressor BSD 62/8 bar in Rayon Plant.	Energy Saving	2.7
Replacing cast aluminum casted rotors with FRP blade rotors in air washer of Rayon Plant	Energy conservation & work environment improved	12.8
Conversion from V' blet drive to flat belt drive in Rayon Plant.	Energy conservation & work environment improved	4.18
Replacement of transport system compressor no.1 by EE (trilobe) compressor in Rayon Plant.	Energy conservation & work environment improved	8.75
Replacement of conventional 4*18W FTL fitting by EE LED fitting in Rayon Plant.	Energy conservation & work environment improved	1.57
Optimization of pot motors power consumption by segregation of high wattage motors in Rayon Plant.	Energy conservation & work environment improved	-
Replacement of reciprocating air compressor by screw compressor in Rayon Plant.	Energy conservation & work environment improved	14.7
Optimization of no. of circulation fan running & modification of air stream route in AT dryer in Rayon Plant.	Energy conservation & work environment improved	-
Optimization of HF frequency on high denier Spg m/cs in spinning dept in Rayon Plant.	Energy conservation & work environment improved	1.23
Optimization of HF frequency on colour Spg m/cs in spinning dept in Rayon Plant.	Energy conservation & work environment improved	-
Replacement of old churn exh. fans in viscose - 2 no's in T.C & CSY plant	Energy conservation & work environment improved	1.9
Repl of lower capacity pump (380 m3) by higher capacity 480 m3 of chilled water pump in engine room of T/C & CSY plant	Energy conservation & work environment improved	16.67
VFD of steeping air washer in TC & CSY Plant.	Energy conservation & work environment improved	-
Replacement of 2 x 36 Watt conventional T/L fittings by TS (1x28 watt) - 150 No's of LED - 50 Nos (Replacement of CSY m/c module tubelight fittings 1x18 watt by 9 watt LED fittings) in T/C & CSY Plan	Energy conservation & work environment improved	1.73
Repl. Of AL centrifuge fan with FRP blade axial fan Spg A/W in T/C & CSY Plant	Energy conservation & work environment improved	1.96
Installation of VFD for De Dusting blower No1 for power conservation in Boiler House.	Energy conservation & work environment improved	1
Replacement of V belt by flat belt for air compressor no.5 in Boiler House.	Energy conservation & work environment improved	1
Replacement of V belt by flat belt for air compressor no.6 in Boiler House.	Energy conservation & work environment improved	1
Replacement of V belt by flat belt for air compressor no.2 in Boiler House.	Energy conservation & work environment improved	1
Reduction in condensate pump loading by feeding feed water condensate to direct to feed water tank & running of small capacity pump in Boiler House.	Energy conservation & work environment improved	0.3
Reduction in flash steam loss & desuperheating water pumping power at T/C desuperheating unit in Boiler House	Energy conservation & work environment improved	-
Power generation from LP turbine utilizing pressure reduction across control in valve Boiler House	Energy conservation & work environment improved	38
Replacement of 24 v 60 watt incandescent hand lamp with 24v 7 watt LED lamps 15 nos. in Boiler House.	Energy conservation & work environment improved	0.1

Replacement of old & inefficient transformer of CS2 furnace no.9 in CS2 Plant.	Energy conservation & work environment improved	26

[B] Investment Proposed for next Year

Detail of measures for Environmental Protection	*Environmental Protection Measures*	*Capital Investment (Lacks)*
Online Real time monitoring system for BOD, COD, TSS for ETP Water	Improvement in work environment / legal requirement	20
System for communicating data to MBCB/CPCB server	Improvement in work environment	10
Continuous monitoring system for particulate matter (<2.5 & <10 microns)	Improvement in work environment	10
Online Continuous monitoring system for CS2 & H2S	Improvement in work environment	12
Optimisation of HF frequency on high denier Spinning m/c's in spinning dept.	Energy conservation & work environment improved	1.23
Optimisation of HF frequency on colour Spinning m/cs. In spinning dept.	Energy conservation & work environment improved	-
100 conventional Flame proof lamps to be replaced with Flame proof LED Lights	15 KWh/day	9
High Pressure jets for Filter press Cleaning	Water conservation	3
Tyre Cord wash water overflow to utilize for filter cloth cleaning.	Water conservation	5
Evaporator II & III effect condensate to be taken for CSY 1st wash.	Water conservation	5
VFD for Soft water pump in spinbath	Energy conservation	-
Replacement the existing acid cooling PHE pump by higher head and send the cooling water directly	Energy conservation	10
LP Heater TP preheat air upto 120°C then fire kerosene for Sodium sulphate drying	Energy conservation	5
Mist condenser for CSY degasser	Energy conservation	3

Any other particulars in respect of environmental protection and abatement of pollution.

Particulars

1. Century lays high emphasis on Environmental Improvement programme like plantation of trees in its premises and surrounding areas. A record number of approx 43199 saplings have survived during the last 16 years. During last year alone, about 7500 trees have been planted. Varieties of planted trees are based on seasonal climate and nature of soil as tested at our own Horticulture Department. The trees planted are, Peltophurum, Acacia, Cassurina, Cassia, Gold Mohar, Rain Tube, Pole Plantation,

Name & Designation

O. R. Chitlange - Sr. President