

HITENDRA V. GANGWAR

B.E. (Civil)

- ◇ Member of Institution of Engineers (MIE)
- ◇ Associate of Institution of Valuers (AIV)
- ◇ Chartered Engineer
- ◇ Government Registered Valuer (CAT I 428 of 1988)

B - 305, Third Floor, Borivali Shopping Center, Chandavarkar Road, Borivali (W), Mumbai-400 092, Maharashtra, India.
Tel. : +91-28901106. Cell : +91-98200 51481.

Ref. No. : _____

Date : _____

HG/473/2014

09/06/2014

To,
The Asst General Manager,
Bank Of Baroda,
Sir. P. M. Road Branch, Fort,
Mumbai.

Dear Sir,

Sub – END use certificate for erection of new plant of **M/s. Seya Industries Ltd.** At MIDC Tarapur, viz Plot no. T-13/14, MIDC, Tarapur Industrial Area, Boisar, Palghar 401 506, Maharashtra.

With reference to aforesaid subject matter, we had personally visited / inspected the factory of SEYA Industries Limited (SIL) situated at T-13/14, MIDC, Tarapur Industrial Area, Boisar, Palghar 401 506 on 02/06/2014, along with Mr. B. S. P. Rao, General manger of SIL. The old facility has manufacturing units for Mono Chloro Benzene (MCB), Para Nitro Chloro Benzene (PNCB) & Ortho Nitro Chloro Benzene (ONCB). The new facility has manufacturing units for 2, 4 Di Nitro Chloro benzene (2,4 DNCB), 3,3 Di Chloro Benzidine (3,3 DCB) and Para Nitro Aniline (PNA). The new facility has Energy House comprising of a Coal Fired Boiler and Steam Turbine to generate electricity. All the units were operational. Modification works were in progress for the old facility.

SCOPE OF WORK

SEYA Industries Limited (SIL) a public limited Company having their manufacturing facilities at T-13/14, MIDC, Tarapur Industrial Area, Boisar, Palghar 401 506 had embarked upon a project for a) setting up a Coal Fired Boiler (CFB) with a Steam Turbine to generate its part requirement of electricity and b) facility for manufacture of specialty chemicals, viz., 2, 4 Di Nitro Chloro benzene (2,4 DNCB), 3,3 Di Chloro Benzidine (3,3 DCB) and Para Nitro Aniline (PNA) which are its downstream products.

For this purpose SIL had requested BOB and CBI to provide certain Limits/Facilities.


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10-B, Borivli Shopping Centre,
Chandavarkar Road,
Borivali (W), Mumbai - 400 092.

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SCOPE: To verify the a) deployment of funds for the purpose it was sanctioned and b) stabilization of manufacturing activities and submit END USE Certificate for 2, 4 Di Nitro Chloro benzene (2,4 DNCB), 3,3 Di Choro Benzidine (3,3 DCB) and Para Nitro Aniline (PNA) at the instance of Bank of Baroda (BOB) who have granted a term loan and cash credit facilities to Seya Industries Ltd. (SIL) in consortium with Central Bank of India (CBI).

METHODOLGY

Following methodology is deployed to ascertain facts for cost of project and End use / stabilisation of production operations:

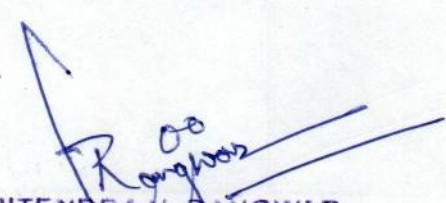
- Visit to the site and physical inspection of construction of project (building) along with the representatives of the Company.
- Perusal of documents provided by the party Accounts / Excises books.

Plant Operations w.r.t.

- 2, 4 DNCB
- 3,3 DCB
- PNA

Works Accounts

- Raw material Bills
- Finished Products Sales Bills
- Central Excise records
- Sources of fund for executing / operation of the project upto 31/03/2014 and means of finance for the same.
- Photographs of the property.
- The Notes, Limitations, Disclaimers & Caveats forming important part of our assignment.


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10-B, Borivali Shopping Centre,
Chandavarkar Road,
Borivali (W), Mumbai - 400 092.

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PRODUCTS AND INSTALLED CAPACITIES

Prior to embarking on new project SIL's product mix was:

1. Para Nitro Chloro Benzene (PNCB)
 2. Ortho Nitro Chloro Benzene (ONCB)
 3. Mono Chloro Benzene (MCB)
- Bye-products
1. Dilute Hydrochloric Acid (HCl)
 2. Crude Di Chloro Benzene (DCB) mixture
 3. Spent Sulfuric Acid

Present (after completion of new project) production capacities are (as informed / projected by the company):

<u>INSTALLED CAPACITY OF PRODUCTS</u>	MTPA
PARA NITRO CHLORO BENZENE (PNCB)	10000
ORTHO NITRO CHLORO BENZENE (ONCB)	5000
MONO CHLORO BENZENE (MCB)	18000
2,4 DI NITRO CHLORO BENZENE(2,4 DNCB)	6000
3,3 DI CHLORO BENZIDINE(3,3 DCB)	7600
PARA NITRO ANILINE(PNA)	4000
META NITRO CHLORO BENZENE (MNCB)	100
	50700


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 Borivali (W), Mumbai - 400 092.

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FINANCIAL PERFORMANCE OF THE COMPANY (as verified from the Audited Balance sheet)

Particulars	Rs. In Lakhs	
	Year Ended	
	31-Mar-14	31-Mar-13
Net Revenue from Operation	13,130.89	5,423.28
Income from non-operational activities	153.66	46.85
Total Income	13,284.54	5,470.03
Employee Benefits Expenses	145.14	116.78
Finance Cost	122.27	5.58
Depreciation and Amortization	887.52	354.09
Other Expenses	11,541.67	4,769.04
Profit / (Loss) Before Tax	587.94	224.54
Tax	252.34	42.82
Profit / (Loss) After Tax	335.60	181.82
Earning Per Share (₹)	3.05	1.65

A complete list of Plant and Machinery planned/projected annexed as **Annexure A**.

Most of the Utilities such as Boiler, Cooling Towers, Chilling Plant, Cooling Water Pumps, etc. were envisaged to be replaced and have been replaced to suit the capacities now installed.


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PROJECTED COST OF PROJECT AND MEANS OF FINANCE**A. COST OF PROJECT**

As per the application Cost of Project (COP) was:

Head	Amount
Building	
a. 3,3 DCB	431.20
b. 2,4 DNCB	77.00
c. PNA	103.00
d. Energy house	342.00
e. Sub-station	30.00
Plant & machinery	
a. 3,3 DCB	2,749.17
b. 2,4 DNCB	623.00
c. PNA	894.82
d. Energy house	750.00
e. Sub-station	
Furniture & fixtures	25.00
Office equipment	25.00
Cars & vehicles	30.00
Others	
a. Consultant fees, processing fees, etc.	134.84
b. Other OPE	120.00
c. Contingency	316.75
Margin money for working capital	1203.15
TOTAL	7,854.92

Building Construction: The building cost estimated as per the architect certificate. The unit wise detail is given as under:

(Rs.in lacs)

Building	Area requirement in sq. ft.	Cost per sq. ft.	Amount
a. 3,3 DCB	11568.93	3727.20	431.20
b. 2,4 DNCB	2583.36	2980.60	77.00
c. PNA	3644.70	2826.02	103.00
d. Energy house & substation	9933.45	3744.92	372.00
Total	27730.44	3545 (avg)	983.20

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The total area requirement as per the building plan is 27730.44 sq. ft. The avg. rate per sq. ft. assumed by the company is Rs. 3545/sq. ft. The above cost also includes construction of free of FSI area like staircase, underground storage tank farms and foundations, roof of all buildings/sheds, electrical sub-station, cooling tower foundation, building & equipment foundations, roads & off-sites etc.

Company has already completed the building construction as observed during the site visit.

i) **Plant & Machinery:** The Company had estimated the total cost of plant & machinery for expansion plan as Rs. 5016.98 lacs.

The unit wise detail is as under:

(Rs. In lacs)

Unit	Total Cost
a. 3,3 DCB	2,749.17
b. 2,4 DNCB	623.00
c. PNA	894.82
d. Energy house	750.00
Total	5016.99

FINANCIAL FACILITIES AVAILED

To part finance the project SIL approached BOB & CBI who sanctioned above Limits.

The sanction letters of Bank of Baroda and Central Bank of India. As per sanction letters no. SMELF/MMSR/2012-13 dated 20/3/2013 and no.AGM/MCB/THAN/2013-14 dated 07/05/2013 of BOB and CBI respectively following credit facilities have been availed by SIL:

Nature of Credit limits	Bank of Baroda (Lead Bank)	Central Bank of India	Total
Term Loan	33.60	14.40	48.00
Cash Credit	28.00	12.00	40.00
LC/Bank Guarantee	-	6.00	6.00
Total	61.60	32.40	94.00

R. Gangwar
HITENDRA V. GANGWAR
 10-B, Borivli Shopping Centre,
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BOB and CBI have sanctioned a Term Loan of Rs. 48 crores for part financing the Building, and Plant & Machinery and Miscellaneous Assets for Energy House, 2, 4 DNCB, 3,3 DCB and PNA Plants.

This certificate is restricted to the term loan.

We have, therefore, restricting our scope to certifying end-use of funds for new Buildings, Plant & Machinery and Miscellaneous Fixed Assets.

During our visit it was observed that 2, 4 DNCB, 3,3 DCB and PNA units were operational along with MCB, PNCB and ONCB and project is fully implemented and commenced commercial production since March 2014 (as verified / informed). Operations of the new plant have since been stabilized.

The List of Plant & Machinery submitted by SIL to BOB which is enclosed.

HIGHLIGHTS OF UNIT

The new downstream units set up by SIL are state-of- the-art with world class capacities. Some of the salient features are highlighted here like:

- A. In 3, 3DCB Unit
 - a. The unit is fully automatic using latest seventh generation instrumentation.
 - b. SIL has installed one of largest Stainless Steel 316L Autoclave Hydrogenator with latest cooling system. The material of construction used is perfect.
 - c. The Continuous Distillation System for Toluene Recovery and Batch Distillation for Ortho Chloro Aniline Recovery. These are again a SS 316L material of construction whereas it could have been safely carbon steel. These are installed with structured packing made of SS 316L and Type 500S whereas for toluene-water distillation random ceramic packing was satisfactory with carbon steel as material of construction. On inquiry with SIL it was revealed that material of construction as SS 316L was provided to eliminate any chance of ferrous contamination in the final product 3, 3, DCB and structured packing was provided to reduce cost of energy as the system was very energy intensive. The automation provided reduces the cost of manpower per unit of product manufactured.
 - d. State-of-the-art fully automatic Centrifuge System: has been installed using Haste Alloy as material of construction. Separately programmed instrumentation is provided.
 - e. State-of-the-art fully automatic Packaging System: for drums (fibre and steel) and bags of various sizes.


HITENDRA V. GANGWAR
10-B, Borivli Shopping Centre,
Chandavarkar Road,
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B. In PNA Unit

- a. State-of-the-art fully automatic Autoclaves
- b. Ammonia Recovery
- c. Agitated Filter Nutches
- d. State-of-the-art fully automatic Packaging System: for drums (fibre and steel) and bags of various sizes.

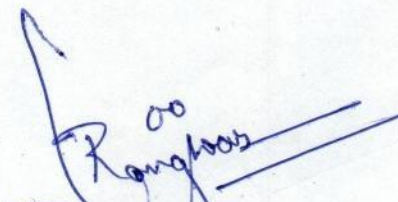
As built List of Machinery is enclosed herewith.

We have also gone through the production records of the factory specially for 2, 4 DNCB, 3,3 DCB and PNA units. The Excise records were also produced before me. The year-to-date production for the current financial year up to May '14 has been as below:

Month	MCB	PNCB	ONCB	2,4, DNCB	3, 3 DCB	PNA
	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity
	MT	MT	MT	MT	MT	MT
Apr '14	904.4	440.4	456.8	250	180.0	48
May '14	795.3	559.8	459.6	275	216.0	64

We have checked the books of accounts of SIL and inspected the project site. Cost project incurred till date is:

1. On Construction of Buildings, etc.
2. On Plant and Machinery


HITENDRA V. GANGWAR
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 Borivali (W), Mumbai - 400 092.

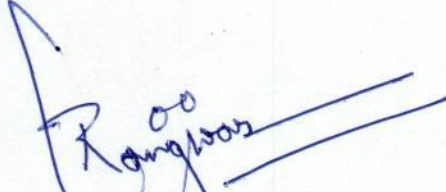
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CONCLUSION

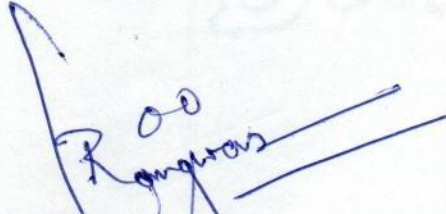
We have gone through the sanction letters of Bank of Baroda and Central Bank of India; the Project Details like products, COP and MOF. We have also inspected the site and seen the plant operations. As per site inspection and as per the books of accounts and documents produced before me like raw material bills, sales invoices, water and electricity bills, Excise records, etc. we are of the opinion that THE END-USE of the funds have been deployed for the purpose it was sanctioned / disbursed for and the operations of the downstream products is stabilised.



Hitendra Gangwar
Govt. Regd. Valuer,
Chartered Engineer (M- 135185-5)



Er. Yog Kishore
B.E.(MECH), Roorkee
FIV, FIISLA,
Govt. Reg. Valuer'
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2,4 DI NITRO CHLORO BENZENE

S. No.	DESCRIPTION	MOC	QUANTITY, No.	CAPACITY
1	PNCB Storage Tank	SS	2	125KL
2	PNCB tranfer pump for Storage to Feed	SS316L-Jacketed	2	10 m3/hr
3	PNCB Feed Tank	Cladded	1	7 KL
4	Sulphuric Acid Storage Tank	Cladded	1	125KL
5	Sulphuric Acid Feed tank	Cladded	1	7 KL
6	Sulphuric Acid tranfer pump for Storage to Feed	SS316L	2	10 m3/hr
7	Nitric Acid Storage Tank	Aluminium	1	50KL
8	Nitric Acid Feed tank	Aluminium	1	5 KL
9	Nitric Acid tranfer pump for Storage to Feed	3.7KW	2	3 m3/hr
10	Spent Sulphuric Acid Storage Tank	Cladded	2	125KL
11	Spent Sulphuric Acid Feed Tank	Cladded	1	7 KL
12	Spent Sulphuric Acid tranfer pump for Storage to Feed	1.1KW	2	1 m3/hr
13	D.M.Water Storage tank	Cladded	2	85KL
14	Hot Water Generation Tank	Cladded	1	20KL
15	D.M.Water trf pump for storage to generator	SS316	1	1 m3/hr
16	Soda Ash Solution Preparation Vessel	Cladded	1	10KL
17	Soda Ash Solution Feed Vessel	Cladded	1	2 KL
18	MCB Storage Tank	Cladded	1	125KL
19	MCB feed Tank	Cladded	1	7KL
20	DNCB Product Storage tank	Cladded	2	49KL


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S. No.	DESCRIPTION	MOC	QUANTITY, No.	CAPACITY
21	DNCB Feed Tank for Flaker	SS316L	1	20
22	DNCB trf. Pump from Storage to Flaker Feed Tank	SS316L-Jacketed	2	3 m3/hr
23	Flaker	SS316L	1	1 TPH
24	Product Bagging System	SS316L	1	1 tph
25	By-Product Liquor storage tank	Cladded	2	49KL
26	By-Product Liquor trf Pump for Dispatch	SS316L	1	10 m3/hr
27	Tank for Common Scrubber System (acidic water)	SS316	1	5KL
28	Collection Pot for PNCB	SS 316	1	100L
29	Knock Out Drum for Nitration Mass	SS 316	1	2.16KL
30	Recovered NCB Tank	SS 316	1	100L
31	Collection Tank for NCB from Separator	SS 316	1	1KL
32	Continous Nitration System(Nitrators, Seperators, Washers, Extractor, Holding Vessel, Dryers, etc)	SS316L	1	500TPM
33	Crude DNCB Holding Tank	Cladded	1	7 KL
34	Crude DNCB Storage Tank	Cladded	1	49KL
35	Crystallisers for Product Recovery	SS316L	1	7 KL
36	Tank for Intercut & ML stage I	SS 316	1	8.3KL
37	Tank for Intercut & ML stage II	SS 316	2	6.14 KL
38	Dearation Tank for Primary Heating and Cooling	SS 316	4	27L
39	Dearation Tank for Secondary Heating and Cooling	SS 316	4	27L


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40	Expansion Tank for Primary Heating and Cooling	SS 316	2	2.36 KL
41	Expansion Tank for Secondary Heating and Cooling	SS 316	2	2.36 KL
42	Crystallizer for DNCB (92.5 %)-(STAGE -I)	CS	1	403 m2
43	Crystallizer for DNCB (99.5 %)-(STAGE-II)	CS	1	269 m2
44	DNCB Drying System with Reboiler, Condenser, Vaccum Ejectors, Traps,etc.	SS 316 L	-	1
45	Pipes, Valves and Pipe-fittings			Full Set
46	Electrical			Full Set
	MCC#8 Panel, 338.8 KW			1
	LDB Panel			1
	PDB Panel			1
	Cable, Cable Trays, Lightings			one set
	Instrumentation			
1	Beacon, Burst Indicating Sensor, Density - Transmitter, Flow Transmitters, Hooters, Level Gauges, Level Transmitters - DP Type, Pressure Gauges, Pressure regulating Valves, Pressure Safety Valve, Pressure Transmitters, Rupture Discs, Temprature Element,PT-100, Solenoid Valves, Proximity Switches, Thermal Relief Valves, Temperature Transmitters, Thermowells, On/Off Valves, Control Valves, Load Cell,Weight Transmitter, PLC Panel, instrument cables, pipes, etc.			Sets


HITENDRA V. GANGWAR
 10-B, Beriyl Shopping Centre,
 Chandavalkar Road,
 Borivali (W), Mumbai - 400 092.

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MONO CHLORO BENZENE

Sr. No	Name of the Equipment	Material of Construction	Qty.
1	Chlorine Header 3" NB Sch 80 Seamless MS Pipe with 8 nos. of Phosphor Bronze Needle valve.	Mixed	Set
2	Sludge Separator – Jacketed, size 350 NB x Sch. 80.	MS	1
3	Chlorine Evaporator, Bayonet Type size 450mm Ø x Sch 80 x 3048 mm long, Bayonet size 300mmØ x Sch 40 x 1834 long with 9.5 mm thick monel lining up to 762 length.	Mixed	1
4	E.O.T. Crane, Capacity 2 Ton, Safex Electro Mech. Pvt. Ltd. make, Span 20 Mtr. with non flame proof 3 HP / 1440 rpm motors along with accessories.		1
5	Caustic Scrubber having size 450 mm Ø x 12 Mtr. lg x 5 mm thick packed with 20 mm ceramic interlox saddle up to 7 mtr. length along with accessories.	FRP	1
6	Caustic Storage Tank, Vertical, Cylindrical, size 2000 Ø x 3000 st. ht x 10 mm, capacity 10,000 ltrs.	HDPE	1
7	Blower for fume extraction system, Capacity 750 CFM along with 3 HP/1440 rpm motor, belt drive & accessories.	FRP	2
8	Benzene Underground Tank, Horizontal, size 2500 Ø x 15000 lg. x 10 mm, Capacity 120,000 Ltrs, along with accessories.	MS	4
9	Benzene Day Tank, Horizontal, dished ends, capacity 36000 ltrs, with MS supports, size 2550 Ø x 8100 lg. x 8 mm along with accessories.	MS	1
10	Benzene drying System consisting of packed Tower, size 750 Ø x 3200 ht x 10 mm thick, packed with molecular sieve type 4A, 1.5 mm Ø, along with	MS	2
	Y Steam Heater,		
	Y Nitrogen Chiller HAT 28.5 M ² ,		
	Y Nitrogen Cooler HTA 28M ³ .		
	Y Separator size 346 ID x 1090 ht, 5 mm thick,		
	Y Electrical Heater, 9 KW Coil		
	Y Dump Tank, size 600 Ø x 1500 L		
	Y Twin Lobe Rotary Compressor, Capacity 110.27 CFM.		
11	Benzene Feed Tank, Horizontal, size 1137 Ø x 2250 L x 6 mm, Capacity 2,000 Ltrs.	MS	1
12	Benzene Feed Tank, Horizontal, size 1137 Ø x 2250 L x 6 mm, Capacity 2,000 Ltrs.	MS	1
13	Benzene Gas Liquid Separator, Capacity 1,600 Ltrs.	MS/ Lead lined	2


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Sr. No	Name of the Equipment	Material of Construction	Qty.
14	Benzene Gas Liquid Separator, Capacity 532 Ltrs.	MS/ Lead lined	2
15	Chlorinator Bottom Cooler, HTA- 30.4 M ² .	Graphite	2
16	Chlorinator Gases Condenser, HTA - 5.8 M ²	Graphite	2
17	DCB Circulation Tank, Capacity 2,500 Ltrs.	MS/ Lead lined	1
18	HCL Benzene Scrubber in two segments, Capacity 635 Ltrs. size 450 Ø x 5000 L x 8 mm thick, packed with Ceramic saddles 20 mm size.	MS/ Lead lined	1
19	Crude MCB Storage Tank, Horizontal, size 7076 Lx 2116 Ø x 8 mm, Capacity 24,000 Ltrs.	MS / Carbon Lined	2
20	HCL Stripping column, size 524 ID x 8000 L. x 6 mm thick, capacity 1360 ltrs, having 7 segments, packed with ceramic saddles	MS / Carbon Lined.	2
21	HCL Stripper Re-boiler, size 500 Ø x 6 mm with outside U-tube bundle, HTA - 5 M ² .	MS	2
22	HCL Reflux Condenser along with Glass Separator. HTA - 24.32 m ²	Graphite	2
23	Benzene Distillation Column, size 1100 x 18,892 L x 10 mm thick, packed with bubble cup trays – 25 nos.	MS	1
24	Benzene Distillation Reboiler, shell 1000 Ø x 1950 L x 6 mm with U-tube bundle, HTA –22 M ²	MS	1
25	Benzene Condenser, HTA-26.2 M ²	MS	1
26	Benzene Vent Condenser, HTA - 0.98 M ²	Graphite	1
27	Benzene Product Cooler, HTA 5.8 M ²	Graphite	1
28	Benzene Accumulator, Capacity 200 Ltrs.	MS	1
29	MCB Distillation Column, size 700 Ø x 21110 L x 8 mm with six segments packed with bubble cap trays.	MS	1
30	MCB Distillation Reboiler, shell 800 Ø x 1950 L x 6 mm along with U-tube bundle, HTA 14 M ²	MS	1
31	MCB Condenser, shell 300 NB Sch 40 x 2986 L along with U-tube bundle, HTA 10 M ²	MS	1
32	MCB Vent Condenser, HTA -1 M ²	MS	1
33	MCB Product Cooler, Shell 300 Ø x 2948 L x Sch. 40 pipe along with tube bundle, HTA - 5.7 M ²	MS	1
34	MCB Accumulator, Capacity 200 Ltrs.	MS	1


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