



**WORK STUDY TO REVIEW THE
STAFF STRENGTH IN
MILLWRIGHT SHOP AT CARRIAGE &
WAGON WORKSHOP - PERAMBUR**

SOUTHERN RAILWAY

PLANNING BRANCH

G.275/WSSR-072021/2020-21

**WORK STUDY TO REVIEW THE
STAFF STRENGTH IN
MILLWRIGHT SHOP AT CARRIAGE &
WAGON WORKSHOP - PERAMBUR**

STUDIED BY

**WORK STUDY TEAM
OF
PLANNING BRANCH**

SEPTEMBER 2020

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(ii)

ACKNOWLEDGEMENT

The study team is thankful to CWM and other Officers, Supervisory staff of Carriage & Wagon Workshop and staff of Personnel Branch for their valuable guidance and co-operations extended to the study team for the successful completion of the study.

(ii)

AUTHORITY

Annual Program of work studies approved by SDGM for the year 2020-21

(iii)

TERMS OF REFERENCE

To review the staff strength at Millwright Shop, Carriage & Wagon workshop, Perambur.

(iv)

METHODOLOGY

- 1) Collection of data regarding Sanctioned & Actual strength of staff in Millwright Shop/CW/Perambur.
- 2) Discussion with the Coordinating Officer and Coordinating Supervisor.
- 3) Observation of Present Work Load.
- 4) Wherever required staffs are allowed on need base.

(v)

SUMMARY OF RECOMMENDATIONS

Recommendation No.1:

9 posts of Sr. Technician/MMW in Level 6 (GP Rs.4200) are found excess to the requirement and the same may be surrendered and credited to the vacancy bank.

(9 posts)

Recommendation No.2:

35 posts of Technician/Gr.I/MMW in Level 5 (GP Rs.2800) are found excess to the requirement and the same may be surrendered and credited to the vacancy bank.

(35 posts)

Recommendation No.3:

6 posts of Sr. Technician/Gr.III/MMW in Level 2 (GP Rs.1900) are found excess to the requirement and the same may be surrendered and credited to the vacancy bank.

(6 posts)

Recommendation No.4:

1 post of Ch. OS in Level 7 (GP Rs.4600) 1 post of Sr. Clerk/Clerk in Level 5 (GP Rs.2800) are found excess to the requirement and the same may be surrendered and credited to the vacancy bank.

(2 posts)

(Total posts : 52)

CHAPTER - I

1.0 INTRODUCTION

1.1 The Carriage & Wagon Works, Perambur is the oldest Broad Gauge Mechanical workshop in the Southern Railway. This workshop is established in the year 1856, initially carried out periodic overhaul of Steam Locos, coaches and wagons belonging to the erstwhile Madras and South Maratha Rail Company. The maintenance work of Locos was later transferred to Loco Works in 1932. Since then this workshop has been dealing with only Carriage and Wagon POH. Till 1963 the Carriage Works was rendering assistance to ICF by furnishing the newly manufactured Shells. Now, this workshop provides periodic overhaul to coaches and wagons. The AC coach overhauling started during 1954. The electrical maintenance, Train lighting and AC coach electrical systems are maintained by Electrical Department.

1.2 Carriage and Wagon workshop already obtained ISO – 14000 Certification.

1.3 SALIENT FEATURES

- Area 129 Acres
- Covered area 22 Acres
- Rail track within workshop 45 Kms.
- Electricity Consumption 3 Lakhs units per month
- No. of Machineries and Plants 610
- Consumption of steel 3600 MT annually
- Consumption of furnace oil 800 KL annually

CHAPTER – II

2.0 PRESENT SCENARIO

2.1 The Carriage and Wagon Workshop is mainly associated with the POH of BG Coaches and Wagons of Southern Railway as well as other Zonal Railways. This workshop in its pursuit to quality and commitment has been certified as an ISO-14000.

2.2 THE MAJOR ACTIVITIES IN THIS WORKSHOP ARE:

- POH of BG coaches of all types
- POH of BG wagons of all types
- Conversion, modification of coaches and wagons and retro fitment of components under “Rolling Stock Programme”.
- Repairs to coaches and wagons like accident damaged HR, advance POH etc.
- Repair and supply of coach and wagon wheels to Divisions.
- Repair and supply of Laminated Bearing springs to Divisions.
- Repair and supply of Slack adjuster, Shock absorber and Distributor valves to various divisions.
- Repair of EMU wheels and supply to the EMU shed at Avadi.
- Training of Apprentices.

2.3 As on 30.6.2020, the Sanction, Actual and Vacancy position submitted by WPO/CW/PER vide letter No.CPB/P1/135/CO-Ord/MPP dated 15.07.2020 at Millwright Workshop/CW/PER is **242** and the actual staff working is **139**. There is a vacancy of **103 posts** (Annexure – I)

2.4 MILLWRIGHT WORKSHOP:

The major activities involved in Millwright Work Shop are:

- Maintenance of all Machinery and plant of CW/PER including carrying out schedules and Breakdown.
- Operation of Steam boiler and supply of steam, operation and Maintenance of water pumps, Air Compressor , Compressed air pipes and ETP systems.
- Re-building and maintenance furnaces.

- Support to core activities of coach and wagon POH by manufacture of critical items, gadgets, improvement apparatus etc.,
- Receipt and commissioning of machines, Condemnation and disposal of machines, Re-siting machines, foundation of machines.
- Maintenance of CO2 and inverter arc welding plants and mechatronics lab activities.
- Maintenance of oxygen gas pipe system.
- Maintenance of R.O. plants
- Repairs to Hydraulic Jack, Screw Jack, Machine chucks, extractors etc., of shops and divisions.
- Bailing out water from pits during rain
- Assistance in fire fighting
- Lowering and raising of motors of EOT cranes, machineries, Traverses and Electric hoists.
- Coordination and assistance to Engineering & Electrical departments.
- Modification of machines.
- Mechanical maintenance of M&P of MAS, SA and PGT divisions & Weighing machines of MAS Division.
- Fabrication of structures for making low roof working sheds like work done for CBC maintenance at CR, Air Reservoir cleaning, Compressor room for project, Axle Box cleaning area at W&T etc.,
- Follow up AMC of Fire Extinguishers, procurement and distribution of Fire Extinguishers.
- Tensile Testing of lifting tackles, laying safety pipe lines (hand rails) for working at heights in WR shop, Paint shop etc.,
- Development of gadgets equipments to assist coach and wagon POH.

2.5 VARIOUS SECTIONS IN MILLWRIGHT SHOP:

- ❖ General Carriage shop
- ❖ Crane & Traversers
- ❖ Air Compressor Section
- ❖ CR complex Machine Maintenance section
- ❖ Machine Section
- ❖ Spring Shop maintenance section
- ❖ Up Country section
- ❖ WR machine maintenance section & Mechatronics lab
- ❖ Development & Jack section

2.6 JOB RESPONSIBILITIES

DEVELOPMENT SECTION:

- Maintenance of machines.
- Manufacture of fixtures and gadgets.
- GA card punching clock maintenance.
- Maintenance of hand tools for different shops.
- Developmental works to improve the quality of work.
- Maintenance of 10 ltrs. RO Plants.
- Fabrication of Stainless Steel Under slung water tank (Direct Incentive work) on requirement.
- Fabrication work for tanks.
- Trial and experiment work.
- This section performs as an emergency gang to do any task
- Inter shop work orders.
- M&P records maintenance.

JACK SECTION

- Repair &Overhauling of Jacks in CW/PER and MAS division.
- Machine chuck repair work in CW/PER and Madras division
- M&P records maintenance.
- Maintenance of stores.
- To Coordinate for AMC to fire Extinguishers.

MACHINE SECTION

Manufacturing of the components required urgently for restoring the machines and plants in shorttime to avoid idle period in CW/PER and outstation machines of Madras, Salem & PGT division.

- 2.7 The list of Preventive Maintenance Schedule for critical M & P, cranes & Traversers is enclosed as Annexure – II
- 2.8 The list of Preventive Maintenance Schedule for Weighing Machine for the year 2019-20 is enclosed as Annexure – III.
- 2.9 The list of Maintenance schedule chart for Air Compressors at PGT Division & M & P for SA & PGT Divisions for the year 2020 is enclosed in Annexure – IV.
- 2.10 The list of Annual Expenditure of AMC for the last three years is closed in Annexure - V

2.11 ACHIEVEMENTS OF MILLWRIGHT SHOP DURING 2019-2020:

- 1. Reva Traverser of WT Re-conditioning.
- 2. Provision of Infrared safety curtain for CTRB Grease Seal. Press and WR 334 Shearing machine.
- 3. Pneumatic system arrangement for sludge removal from the wash tank of ultramax bearing cleaning plant.
- 4. Provided a 40KVA generator, 45 CFM mini compressor and 1000 ltr. capacity steel tank for water storage etc in Heritage coach of CW/PER.
- 5. Developed a test bench to test Speed sensor of WSP/LHB.
- 6. Designed and developed test bench for testing air springs.
- 7. Designed and developed test kit for testing clip away/earthing device/LHB.
- 8. Provided extension of DSL line in TLD Traverser
- 9. To comply the safety requirements and as per the directions of Director of health and safety, foot operated press brake is converted into double hand operated press.
- 10. Developed a Aerosol can crusher.
- 11. Designed and developed a pneumatically operated press for removal and Fitment of nylon bushes in coach brake levers.

2.12 LIST OF MACHINERY & PLANTS COMMISSIONED DURING 2019-20

- 1) Sumanglam RB Extractor 2 Nos.DOC200320
- 2) Laser Engraving Machine DOC200320
- 3) Perfect mobile LHB bearing Extractor 2 nos.DOC 240720
- 4) Oil Cooler for HMT CNC ATL.(in-house)
- 5). L&T CO2 welding plants -13 nos. condemnation.
- 6) CCTV camera installation 72 nos. at CW/PER.
- 7) Earthing device POH, 746 Nos received, 725 nos issued.
- 8) Commissioning of 36 nos. MIG/MAG CO2 welding plant
- 9) Commissioning 09 nos of AC-DC TIG Welding plants.
- 10) Calibration of Welding plants for IS-3834.(110Nos IGBT plants &85 nos. Co2 plants)
- 11) Commissioning of 300 CFM rotary screw compressor at LBR
- 12) Commissioning of two 250 LPH RO plants at Wagon paint shed and NSMS.

2.13 OTHER MAJOR WORKS CARRIED OUT:

- 1) S P shop Shot penning machine manganese rollers replaced after required modification
- 2) Load testing mc safety guard made working,
- 3) Integration of compressed air pipe line of NCR, TLD &Paint shop to avoid idle time during breakdown
- 4) CR shop 13 & 14th bay DSL laying work for newly commissioned in house
- 5) Developed one Ton single girder EOT crane.

2.14 The details of each Sectional activities and the requirement of staff for each Section is analyzed in the subsequent chapter.

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CHAPTER - III**3.0 CRITICAL ANALYSIS****3.1 MILL WRIGHT (GENERAL CARRIAGE SHOP)****Important activities of GC Shop are:**

- Cranes, Traversers, Hoist and Winches maintenance
- Wagon shop machine maintenance
- Spring shop maintenance
- W&T and NMS maintenance
- Air Compressor maintenance (centralized & Decentralised)
- CR complex machine maintenance
- Heavy repair activities
- Out-station machine maintenance
- Development & CO₂ plant maintenance section
- Machine and Jack repair section

3.2 CRANE & TRAVERSERS MAINTENANCE (23 STAFF)

This section is responsible for preventive and brake down maintenance of

- 34 numbers of E.O.T Cranes and 1 No. of Goliath crane.
- 6 numbers of Traversers
- 3 numbers of Winches
- 30 numbers of Electrical hoists
- Electrical motor lifting and lowering
- Moving of defective motors to Electrical workshop and bringing back to work spot after repair.
- Overhead wires cross arm and electrical post setting and aligning work in co-ordination with electrical department in Traversers and Cranes.
- Co-coordinating with PWI BRI in aligning Traverser tracks and crane tracks.
- Modification works in Cranes & Hoists.
- Lowering & raising of electric hoist for repair and re-siting of hoist.

3.3 AIR COMPRESSOR SECTION (13 STAFF)

This section is responsible for

- Operation and maintenance of 21 numbers Air compressors.

- Maintenance of Pneumatic tools like Riveting guns, Drilling machines, grinding machine and chipping hammer.
- Pneumatic pipe lines laying and maintenance
- Maintenance of Air compressors in MAS, Salem & PGT division
- Water pipe line for plants and for cooling system.
- Maintenance of vaccum plant at SA Division.
- Maintenance of water pumps at CW/PER like GLR to HLT at SP, Paint, RT etc.,
- Fitment of end nipples and nuts of gas hoses and cutting pneumatic hoses.
- Maintenance of water pumps at CW/PER (Bore well pumps and submersible pumps)
- Power car fuel leakage arresting work.
- Water serving pipe line maintenance in Paint, Train lighting shed laid for coach roof testing and watering.
- Coordinating of 250/400 ltrs. RO plant AMC
- Portable R.O plant repair and maintenance (34 Nos.)
- Removal/draining of water from A/C test pit & TLD pit during rainy season.
- Coordination for receipt erection and commissioning on new air compressor at CW/PER.
- High pressure water jet pumps maintenance.

3.4 **CR COMPLEX MACHINE MAINTENANCE SECTION - (7 Staff)**

This section is responsible for preventive and brake down maintenance of machines available in CR, CB and Paint shop and maintenance of one Incinerator.

3.5 **HEAVY REPAIR SECTION - (18 STAFF)**

This section is responsible for

- Sheet bending, rolling, pipe, rod bending work related to maintenance.
- Removal of old sheds.
- Building of new sheds.
- Repairs to tractor trailers
- Erection & dismantling of boilers.
- Painting of machines in CW/PER (excluding cranes).

- Maintenance of centralized liquid oxygen plant at W & T shop and NCR shop.
- Relining of oil fired furnace and open type furnace.
- New machine erection and re-sitting of machines.
- Removal of condemned machines.
- Receipt and commissioning of trial run for new machines.
- Foundation for new machines erection wherever required.
- Chimney fabrication and fixing.
- Digging of earth for laying of electrical cable, electrical post, water pipe lines.
- Assistance to core activity.
- Oxy-acetylene flame cutting and Arc welding activities.
- Disposal of machines through DS-8.
- Handling of Transport of bulk materials.

3.6 **MACHINE SECTION - (8 + 3 CR STAFF)**

This section involves in manufacturing of the components required for maintenance of machines and plants in CW/PER and outstation machines of MAS, Salem & PGT Division. Assistance to coaching and wagon complex in threading pipes and manufacturing fasteners in emergency.

3.7 **SPRING SHOP MAINTENANCE - (8 STAFF)**

This section is responsible for

- Maintenance of Burners and furnace oil pre-heating system.
- Blower maintenance of furnaces
- Furnace oil pipeline, free heating and distribution system of furnace oil .
- Maintenance of spring shop machines
- Operations of drinking water pump GLR to Over head tank.
- Water supply to A/C coaches and for fire extinguishing purpose.
- To attend fire calls whenever there is emergency.

3.8 **UPCOUNTRY SECTION - (7 STAFF)**

This section is responsible for

- Maintenance of machines in MAS, SA and PGT divisions including Pit wheel lathe and surface wheel lathe.

- Maintenance of cranes, Electric hoist and 1 number of winch in MAS, SA and PGT divisions.
- Maintenance of weighing machines in MAS Division.

3.9 **WR MACHINE MAINTENANCE SECTION - (8 STAFF)**

This section is responsible for preventive and brake down maintenance of 32 machines available in WR and RT shop, which includes operation and maintenance of one steam boiler in WR shop.

3.10 **W&T MACHINE MAINTENANCE SECTION & MECHATRONICS LAB – (13 STAFF)**

This section is responsible for preventive and brake down maintenance of machines

- In W&T and NMS shops
- Maintenance of encoder unit in LBR cranes.
- Maintenance of electronic machines at NSMS & SP shop.
- Maintenance of oil dispenser unit in CR shop
- Maintenance of spring height classification gadgets.
- Maintenance of BMBC endurance test rig.
- Maintenance of 45 Nos. electronic controlled and CNC machines in CW/PER.
- Maintenance of CO₂ welding plants, plasma cutting machines.
- Maintenance & Repair of Remote control of cranes used in W&T, CR shops.
- Maintenance of Anti-collision Limit Switch in cranes of CW/PER.
- Outstations repairs of electronic machines such as Loco, ICF, TPTY, GOC, etc.
- Attention of defective PCB of outstations at CW/PER.
- Hydraulic, pneumatic and electronic testing.
- Maintenance of Earthing device.

3.11 **DEVELOPMENT & JACK SECTION – (13 STAFF)**

This section is carrying out the following work

- Any Trail and experiment work
- Performing an emergency gang to do any work.
- Repair & Overhauling of Jacks in CW/PER and MAS division.

- Machine chuck repair work in CW/PER and MAS division
- Inter shop work orders
- Punching clock maintenance
- M & P records maintenance
- Maintenance of 10 ltrs RO plants.
- Manufacture of fixtures and gadgets.
- Maintenance of all hand tools of different shops.
- Maintenance of stores.
- Maintenance of machines of central machine section.
- Coordinating AMC of fire Extinguishers.

3.12 **ACTUAL STAFF WORKING AT MILL WRIGHT SHOP**

SL. NO	NAME OF THE SECTION	ACTUAL STAFF WORKING
1	Crane, Traversers section	23
2	Air compressor section	13
3	CR complex section	7
4	Heavy repair section	17
5	Machine section	11
6	SP maintenance section	8
7	Up country & Out station maintenance section	7
8	WR maintenance section	8
9	W&T, NMS Maintenance section	13
10	Development section	13
11.	Supervisors (SSE & JEs)	19
TOTAL		139

On discussion with the Co-ordinating Supervisor, it reveals that the number staff working at the millwright section is sufficient to manage the present level of work load. Apart from that, the vacant posts are lying since long and there is no scope of filling the posts. On direct observation, the work study team is also ensuring that the staff deployed is at par with the present level of work load. There is no fixed time to rectify the breakdown failures. It is seen from the three years (Period from March 2017 to April 2020) (Annexure – VI) BD

failures and the rectification time to attend the failures was varied from minutes to hours together. The rectification time may vary according to the age and location of the machine. Hence, the work study team could not assess the time taken for each and every activities. Apart from that, the staffs are attending periodical schedule preventive maintenance of weighing machine at MAS, SA and PGT divisions. To attend the Schedule & Preventive maintenance of M & P and weighing machines at CW/PER, MAS, PGT and SA divisions, 192 Supervisors, Technicians and Helpers are allowed on need base. The details of staff required for each category are tabulated as follows:

3.13 SANCTION VS REQUIRMENT:

SL. NO.	DESIGNATION	SANCTION	ACTUAL	REQUIRMENT	SURPLUS
1	SSE*	15	15	15	-
2	JE*	5	4	5	-
3	Sr. Technician	61	52	52	9
4	Technician/Gr.I	109	43	74	35
5	Technician/Gr.II	14	3	14	-
6	Technician/Gr.III	24	6	18	6
7	Helper	14	16	14	-
Total		242	139	192	50

Note : *The supervisors (SSE & JEs) are being utilized in various shops at CW/PER and there is no earmarking them for a particular shop. Hence, the sanctioned strength of SSE/JEs at Millwright shop are allowed to continue.

3.14 MINISTERIAL STAFF:

At present 3 Ch.OS/OS and 2 Sr.Clerk/Clerk (Total 5) are sanctioned for MW/CW/PER. Actually 2 Ch.OS/OS and 1 Sr.Clerk/Clerk (Total 3) are working. The three Ministerial Staff actually working are allowed to continue on need basis.

3.15 SUMMARY OF REQUIREMENT OF STAFF FOR MW SHOP/CW/PER

Shop	Sanction	Actual	Required	Surplus
MILLWRIGHT (Supervisors, Technicians & Helpers)	242	139	192	50
Ministerial	5	3	3	2
Total	247	142	195	52

Recommendation No.1:

9 posts of Sr. Technician/MMW in Level 6 (GP Rs.4200) are found excess to the requirement may be surrendered and credited to the bank of surplus posts.

(9 posts)

Recommendation No.2:

35 posts of Technician/Gr.I/MMW in Level 5 (GP Rs.2800) are found excess to the requirement may be surrendered and credited to the bank of surplus posts.

(35 posts)

Recommendation No.3:

6 posts of Sr. Technician/Gr.III/MMW in Level 2 (GP Rs.1900) are found excess to the requirement may be surrendered and credited to the bank of surplus posts.

(6 posts)

Recommendation No.4:

1 post of Ch. OS in Level 7 (GP Rs.4600) and 1 post of Sr. Clerk/Clerk in Level 5 (GP Rs.2800) are found excess to the requirement may be surrendered and credited to the bank of surplus posts.

(2 posts)

(Total posts : 52)

CHAPTER – IV

4.0 PLANNING BRANCH'S REMARKS ON CO-ORDINATING OFFICER'S VIEWS

The work study was conducted to review the staff strength of Millwright Shop/CW/PER and draft report was sent on 09.09.2020. No remarks has been received from the Co-ordinating Officer. The work study is released without remarks.

CHAPTER V

5.0 FINANCIAL SAVINGS

5.1 If the recommendations made in the study report are implemented, the annual recurring financial savings will be as under:

Sl. No.	Designation	Pay Matrix Level	No. of Posts	Money Value (Rs.)	Annual savings (Rs.)
1.	Sr. Technician	6	9	86,463	93,38,004
2.	Technician – Gr.I	5	35	71,078	2,98,52,760
3.	Technician – Gr.III	2	6	48,614	35,00,208
4.	Ch. OS	7	1	1,09,571	13,14,852
5.	Sr. Clerk/Clerk	5	1	71,078	8,52,936
	TOTAL		52		4,48,58,760

ANNEXURE – I

SANCTION, ACTUAL AND VACANCY POSITION AT
MILLWRIGHT SHOP/CW/PER

Auth : WPO/CW/PER letter No.CPB/P1/135/Co-Ord/MPP dated 15.7.2020.

Sl. No.	Designation	Sanction	Actual	Vacancy
1.	SSE	15	15	-
2.	JE	5	4	1
3.	Sr. Tech	61	52	9
4.	Tech – I	109	43	66
5.	Tech – II	14	3	11
6.	Tech – III	24	6	18
7.	Helper	14	16	+2
Total		242	139	103

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PREVENTIVE MAINTENANCE SCHEDULE FOR WEIGHING MACHINES - DOC CODE - FOR THE YEAR 2019 - 2020

S No	M/C No.	Description of M/C	Capacity	Shop	Sched	April	May	June	July	August	September	October	November	December	January	February	March
1	88/45	Weighing machine	1000 kg	GC SHOP	A			29-5-19									
2	488 1208	"	1000 kg	SPRING SHOP	A				19-6-19								
3	129	"	250 kg	PAINT SHOP	A				24-7-19								
4	1235	"	500 kg	NMS	A					14-8-19							
5	2399	"	500 kg	TRLS	A												
6	S62064	"	300 kg	WR CYLINDER BUNK	A												
7	156	"	250 kg	CR CYLINDER BUNK	A												
8	590	Weighing machine	50 kg	GC SHOP	A												

A-Annual H-Half Yearly
[Signature]
Dy. CMEP

[Signature]
SSE/MW

SSE/Shop

Controlling Officer/Shop

[Signature]
18/01/2019
PE

Dy. CMEP



YEAR PLANNER - 2020
MAINTENANCE SCHEDULE CHART FOR AIR COMPRESSORS PALGHAT DIVISION
UNDER THE JURISDICTION OF CW / PER

Sl No	Description	Station	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
1	Air Compressor	SL/ED												
2	Air Compressor	SL/ED												
3	Air Compressor	IOH/SRR												
4	Air Compressor	SL/MTP												
5	Vacuum Plant	SL/MTP												

ANNUAL

QUARTERLY

A.S. Ravi Kumar
SSE/MW/CW/PER

22 Feb 2020
DCMER

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YEAR PLANNER - 2020
MAINTENANCE SCHEDULE CHART FOR MAP'S AT SALEM AND PALGHAT DIVISION
UNDER THE JURISDICTION OF CW / PER

Sl. No.	Description	Station	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
1	EOT CRANE 10/3T	DSL/ED												
2	EOT CRANE	CBE												
3	EOT CRANE	SRR												
4	TRAM BEAM No.2	DSL/ED												
5	FIXED HAND CRANE	SL/S/ONR												
6	EOT CRANE KRANE	DSL/ED												
7	EOT CRANE KRANE	DSL/ED												
8	EOT CRANE BT	SL/S/ONR												
9	TRAM BEAM No.3	DSL/ED												
10	EOT CRANE BT REVA	DSL/ED												
11	EOT CRANE 3T REVA	DSL/ED												
12	EOT CRANE 40/5T	DSL/ED												

ANNUAL

QUARTERLY



R.S. Ravi
SSE/MW/CW/PER

12/10/2020
DYCMER

Enclosure II

Last three years Annual expenditure of A/c particulars of machines.			Enclosure attached	
Description of machine	AMC		Period	Value in Rs
	From	To		
CNC Surface Wheel Lathe SWL-98	24.12.2016	23.12.2021	1,14,58,217/-	M/S. HYT Engg. Co, Pvt, Ltd., Pune.
CNC Surface Wheel Lathe SWL-148	26.07.2019	25.07.2024	1,26,26,000/-	M/S. HYT Engg. Co, Pvt, Ltd., Pune.
PCB Diagnostic Equipment	20.11.2019	19.11.2021	1,06,011/-	M/S. Q Max Test Technologies Pvt, Ltd., Chennai
Pitless Electronic In-motion Weigh bridge - 120 Ton capacity, 15 km/hr	27.03.2019	26.03.2021	7,67,000/-	M/S. Essae Digitronic Pvt, Ltd., Bangalore.
Water Purifying Plant R.O. Plant type, Qty - 02 Nos	24.03.2014	23.03.2019	3,00,000/-	M/S. Ozone Technologies, Chennai.
Ultramax bearing cleaning machine	11.12.2019	10.12.2024	68,98,280/-	Ultramax Ltd
Fire extinguisher maintenance DCP 5 KG 30 CO2 2 KG 02 FOAM 50 LTR 10 Water mist 9/10 02 DCP 6 KG 150	08.01.2020	07.01.2022	5,99,313.02	M/s Balaaji Enterprises Chennai

Description of machine	AMC		Value in Rs	Firm's Name
	From	Period To		
200 LPH R.O Plant 02 Nos	23.03.2019	22.03.2022	2,47,800/-	M/S. Aqua care, chennai
400 LPH R.O Plant 02 Nos	25.02.2019	24.02.2022	3,44,796/-	M/S. Aqua care, chennai
200 LPH R.O Plant	20.09.2019	19.09.2021	92,040/-	M/S. Aqua care, chennai
250 LPH R.O Plant 02 Nos	19.08.2019	18.08.2024	3,00,000/-	M/S. Aqua care, chennai

Machines under warranty		A		Enclosure attached		Firm's Name	
Description of machine	AMC		Period		Firm's Name		
	From	To					
Computerized electronic fixture for checking sizes of cup & cones of CTRB	26.02.2020	25.02.2022			M/s Bakers Gauges India		
HYT CNC VTL 60	28.11.2018	27.11.2020			M/S. HYT Engg.Co, Pvt, Ltd., Pune.		
Laser engraving machine	20.03.2020	19.03.2022			M/S. Q Max Test Technologies Pvt, Ltd., Chennai		
Perfect Hydraulic puller cum installer Sl.No 188	24.07.2019	23.07.2021			M/S Perfect hydrotech Engineers, Munger		
Perfect Hydraulic puller cum installer Sl.No 191	24.07.2019	23.07.2021			M/S Perfect hydrotech Engineers, Munger		
Ultramax axle box cleaning plant	10.01.2019	09.01.2021			M/s Ultramax Ltd, Chennai		
TM Mobile sewage evacuation machine for waste disposal	25.01.2020	24.01.2022			M/s Ultramax Ltd, Chennai		
Airless centrifugal shot blasting machine	28.02.2020	27.02.2022			M/s Nesco Limited, Vishnoli		

Description of machine	AMC		Firm's Name
	From	Period To	
300 CFM screw compressor	30.05.19	29.05.2021	M/s kirloskar limited
120 CFM screw compressor	21.04.2019	20.04.2021	M/s kirloskar limited.
120 CFM screw compressor	22.11.2018	21.11.2020	M/s kirloskar limited.
120 CFM screw compressor	21.11.2018	20.11.2020	M/s kirloskar limited.

Number of failures attended, failure hour for each machine wise, shop wise and section wise for past 3 years.

S. No	Machine	U.C.No	Location	B.D. Hours		
				March - April 2017 -18	March - April 2018 - 19	March - April 2019 -20
1	Power Hammer	111 123 003	SP - 202		NIL	
2	EOT Crane	111 231 003	W&T - 134	13.25	NIL	13.30
3	EOT Crane	111 231 006	W&T - 135	36.50	NIL	166.00
4	EOT Crane	111 231 002	W&T - 136	11.33	NIL	46.00
5	EOT Crane	111 231 001	W&T - 137	53.00	38.50	54.50
6	EOT Crane	111 231 005	W&T - 138	27.50	118.00	561.50
7	EOT Crane	111 432 004	WR - 243	71.00	13.50	10.25
9	EOT Crane	110 322 003	CR - 101	51.60	28.50	11.50
10	EOT Crane	110 322 004	CR - 102	58.50	76.00	18.50
11	EOT Crane	110 332 006	CR - 201	22.75	433.00	172.25
12	EOT Crane	110 332 001	CR - 301	521.25	29.50	NIL
13	EOT Crane	110 432 001	GC - 218	NIL	NIL	NIL
14	Double EOT Crane	110 322 007	LBR - AS/021/01	NIL	3.00	NIL
15	Double EOT Crane	111 322 008	LBR - AS/021/02	NIL	NIL	5.00
16	Double EOT Crane	111 231 007	W&T - 9/5/2004	NIL	70.00	16.50
17	CR - 03 SAICO	110 331 001	CR - 03	21.00	NIL	NIL
18	WR - SAICO	111 432 005	WR - 4/15/2001	NIL	NIL	NIL
19	EOT Crane	111 431 001	WR - 265	5.00	NIL	4.00
20	EOT Crane (Goliath Crane)	111 433 001	WR - 281	NIL	NIL	NIL
21	EOT Crane	111 031 003	Saw Mill - 184	NIL	NIL	NIL
22	EOT Crane	111 031 001	WR - 187	NIL	NIL	NIL
23	CNC Surface Wheel Lathe	111 202 006	W&T - SWL/68	NIL	11.00	112.75
24	Hoist of Centre Lathe	110 504 005	W&T	NIL	NIL	NIL
25	Vertical Turret Lathe	111 209 004	W&T - 113	6.00	NIL	NIL
26	Centre Lathe	110 504 003	W&T - 126	NIL	14.00	NIL
27	Axle Turning Lath	111 204 001	W&T - 129	NIL	NIL	NIL
28	CNC Axle Turning Lathe	111 206 001	W&T - 131	NIL	NIL	2.50
29	Vertical Turret Lathe	111 209 001	W&T - 141	NIL	NIL	NIL
30	AJTB Lathe	111 201 003	W&T - 144	NIL	NIL	39.00

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31	Surface Wheel lathe	111 202 005	W&T - 145	126.00	9.50	NIL
32	Pit Traverser	111 230 002	W&T/TR - 01	328.50	1315.001	2402.00
33	Surface Traverser - 75 T	110 730 001	PS - 249	43.75		NIL
34	Surface Traverser - 100 T	110 330 002	CR - 01/1312	28.75	215.50	NIL
35	Electric Hoist - 3 Ton		W&T	NIL	NIL	NIL
36	Wire rope Hoist - 2 Ton	111 206 002	W&T	NIL	NIL	NIL
37	Wire rope Electric Hoist	111 432 003	WR	NIL	NIL	NIL
38	Electric Hoist	110 339 007	CR	29.00	NIL	NIL
39	Electric Hoist - 3 Ton	110 339 008	CR	NIL	NIL	NIL
40	Electric Hoist - 3 Ton		W&T	NIL	NIL	NIL
41	Electric chain Hoist - 1 Ton		SP	NIL	NIL	NIL
42	Horizontal Drilling & Tapping machine	111 211 001	W&T/SPM - 420	NIL	NIL	NIL
43	Hydraulic wheel press	111 203 001	W&T - 123	15.00	NIL	NIL
44	RB Induction Heater	111 204 006	W&T	NIL	NIL	NIL
45	Hoist of wheel press	111 203 002	W&T	NIL	NIL	NIL
46	Wire rope Hoist 1.6 Ton	110 203 001	W&T	NIL	NIL	2.00
47	Hoist of wheel press	111 203 003	W&T	76.00	NIL	NIL
48	Electric Hoist		W&T	NIL	NIL	NIL
49	Wire rope Electric Hoist		CR	NIL	NIL	NIL
50	Centre Lathe	110 504 004	PC / NMS - 5	NIL	NIL	NIL
51	Shearing machine	111 424 002	WR - 253	337.00	NIL	NIL
52	Shearing machine	110 224 001	CB - 47	NIL	NIL	NIL
53	Radial Drilling machine	111 210 001	WR	NIL	NIL	NIL
54	Electric Winch	110 348 001	PC/CR - 91	NIL	NIL	NIL
55	"C" - Frame Hydraulic Press 100 Ton	110 321 003	WR - 03/223	NIL	NIL	NIL
56	Pipe bending machine	110 362 002	CR - 59	NIL	NIL	NIL
57	Bosh Tank (Wire rope Electric Hoist 3 T		SP	15	46.50	NIL
58	Direct Heating furnace	111 144 003	SP	NIL	NIL	NIL
59	Hydraulic press Brake	110 521 001	NSMS - 3	26.25	308.00	NIL
60	Slotting machine	110 517 004	GC - 155	189.50	NIL	NIL
61	Hydraulic press brake 400 Ton	110 221 004	NSMS - 1	NIL	NIL	174.50
62	Steam Boiler	111 465 001	WR	NIL	NIL	NIL
63	Electro Magnetic crack detector	111 149 006	SP - 1339	4320	NIL	NIL
64	Air compressor	310 627 002	TLD	7.50	NIL	NIL

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65	Shot Peening machine	111 156 001	SP - 1690	6.00	8.00	22.00
66	Guillotine Shearing machine	110 224 003	PC/CR - 94	NIL	NIL	32.25
67	Electronic - in - motion weigh bridge	111 466 002	WR - 960105193	210.50	113.75	NIL
68	Effluent Treatment plant		LBR	NIL	NIL	NIL
69	Direct Heating furnace		SP	40	NIL	NIL
70	Surface Traverser	110 730 001	PS - 249	2.00	NIL	4.00
71	Horizontal metal cutting Band saw	111 425 002	WR - OP/231	NIL	NIL	92.50
72	CNC Axle Turning Lathe	111 206 002	W&T - 1194	171.75	178.50	NIL
73	Normalising Furnace	111 145 002	SP - 189	NIL	NIL	NIL
74	Smithy Furnace	111 145 012	SP-002	6.00	NIL	NIL
75	Circular Saw	111 025 18	CB - 109	NIL	NIL	NIL
76	Spring Load Testing machine	110 349 001	SP - 105	NIL	NIL	NIL
77	Double column Shearing machine	111 424 008	WR-334	142.00	54.00	NIL
78	Spring scrag& Load deflection	111 136 003	SP/STM - 50	NIL	NIL	NIL
79	Directing Heating furnace	111 144 002	SP - 163	335.00	NIL	NIL
80	Wire rope hoist 2 Ton of CNC ATL	111 206 001	W&T	NIL	NIL	NIL
81	WR - Anc - section Hoist			NIL	NIL	NIL
82	Surface Traverser	111 430 001	WR - 276	NIL	1.00	NIL
83	Profile cutting machine	130 880 003	WR	NIL	NIL	NIL
84	EOT Crane 5 Ton		WR	4.50	NIL	NIL
85	Air Compressor	110 427 001	GC - 215	867.00	NIL	NIL
86	Circular saw	110 225 001	CB - 6	NIL	NIL	NIL
87	Double column Shearing machine	110 224 004	CB - 333	80.00	33.00	NIL
88	4 Column "C" - Frame Hydraulic press 50T	110 321 004	CB - 310	NIL	NIL	08.25
112	Scrubber for oil fired furnace			NIL	NIL	NIL
113	Universal Horizontal Milling machine	110 519 004	GC - 323	NIL	NIL	NIL
114	Double ended Grinder	111 116 001	SP - 158	NIL	NIL	NIL
115	Horizontal Hydraulic press	111 421 004	WR - 307	NIL	NIL	NIL
116	Ride on sweeper Karcher	110 472 001	PS - 01	NIL	NIL	NIL
117	Surface Traverser	110 730 002	PS-2301/PER-1	90.50	257.00	231.75
118	Scrag Testing machine	111 136 001	SP	NIL	NIL	NIL
119	Mini Air Compressor	110 327 006	CR - 017	NIL	NIL	NIL
120	Vertical Turret Lathe	112 405 001	W&T - 10	NIL	47.00	NIL

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121	Pillar Drilling machine	110 211 003	CB/CF - 14	64.00	70.00	NIL
122	Vertical Turret lathe	111 209 002	W&T - 117	NIL	NIL	NIL
123	Vertical plate Bending machine	110 262 002	WR/NSMS -2	102.00	NIL	NIL
124	Portable Air Compressor	111 427 004	WR	NIL	NIL	NIL
125	Pillar Drilling machine	110 411 002	GC - 211	NIL	NIL	NIL
126	Air Compressor	110 427 003	GC	NIL	7.50	NIL
127	EOT Crane	111 432 005	WR - 4/15/2001	NIL	NIL	NIL
128	Radial drilling machine	111 410 003	WR - 251	NIL	NIL	NIL
129	Press Brake	110 221 003	PC/CR - 78	NIL	NIL	NIL
130	Hydraulic portable mobile (CTRB mounting/ Dismounting press)	111 221 001	WR - CTRB/ 04/1002	NIL	NIL	NIL
131	Roller Bearing cleaning machine	111 281 001	W&T - 140	NIL	NIL	NIL
132	Bearing Induction Heater	111 444 002	W&T - 00310	NIL	NIL	NIL
133	Bearing Induction Heater	111 279 003	W&T - 03	NIL	NIL	NIL
134	Mini Air compressor		CR	12.00	NIL	NIL
135	Mini Air compressor		TLD	NIL	NIL	NIL
136	Capstan Lathe	110 505 006		NIL	NIL	NIL
137	Horizontal Milling machine	110 519 002	PCM - 20	NIL	NIL	NIL
138	Profile cutting machine	110 580 005	NMS/F - 01	NIL	NIL	NIL
140	Universal Horizontal Milling machine	110 519 004	NMS	NIL	NIL	NIL
141	Spring load Testing machine	110 349 002	SP	NIL	NIL	NIL
142	Grinding machine		WR	NIL	NIL	7.50
143	Single girder EOT crane 1 Ton		DLX	17.50	NIL	168.50
144	Surface Traverser 40 Ton		WR	NIL	NIL	NIL
145	Air Compressor	110 427 004	GC	NIL	NIL	NIL
146	Wire rope Electric Hoist		WR	NIL	NIL	NIL
147	Centre Lathe	110 504 011		NIL	NIL	11.00
148	Surface Wheel Lathe	111 402 003	WR - SWL/99	4.25	9.25	NIL
149	Double Column Shearing M/C	111 424 008	WR - 334			NIL
150	Double Column Shearing M/C	111 424 009	WR - OP / 2299		110.50	117.50
151	Roller Bearing Cleaning Plant	111 481 001	WR - IR/BCP/ 010	2880.00	162.00	NIL
152	Double Ended Automated Greasing Press		WR -			NIL
153	EOT Crane 5 T	111 431 004	WR - 14/05/ 2009	NIL	NIL	NIL

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154	EOT Crane 15/5 T	111 432 006	WR - 02 /15 / 2013		NIL	NIL
155	EOT Crane 15/5 T	111 432 007	WR - 03/15/2013		2.00	NIL
156	EOT Crane 15/5 T	111 432 008	WR - 04/15/2013	530	NIL	NIL
157	EOT Crane 15/5 T	111 432 009	WR - 05/15/2013		NIL	NIL
158	EOT Crane 10 T	111 431 005	WR - 14/10/2014	7.50	NIL	10.00
159	Electric Winch	111 448 002	PC/WR - 258		NIL	NIL
160	Mobile Hyd. Press Mounting /Dismounting	111 447 003	WR - CTRB/ 04/1002		NIL	NIL
161	Screw Air Compressor 160 CFM	111 427 007	WR - SCR0003558	NIL	NIL	NIL
162	Screw Air Compressor 160 CFM	111 427 008	WR - SCR0003560	NIL	NIL	157.00
163	Screw Air Compressor 125 CFM	111 427 005	AR/AB - 37214010059	NIL	NIL	NIL
164	Screw Air Compressor 300 CFM		WR - SCR0004483	NIL	NIL	NIL
165	Screw Air Compressor 120 CFM		WR - SCR0004455	NIL	NIL	43.50
166	Air Compressor 45 CFM	111 427 006	WR - 1016	NIL	NIL	NIL
167	Air Compressor 45 CFM	110 127 001	BTC - 1015	NIL	NIL	NIL
168	Portable Air Compressor	111 427 003	WR - A23	NIL	NIL	NIL
169	Portable Air Compressor	111 427 004	WR - A22	NIL	NIL	NIL
170	Oil Fired Boiler	111 445 002	WR - EPBL/0681	18.00	23.50	96.50
171	Hyd. Power Rig & Tooling	111 487 001	WR - 01/4013	NIL	NIL	NIL
172	Hyd. Power Rig & Tooling	111 487 003	WR - AIPL/0070	NIL	NIL	NIL
173	Hyd. Power Rig & Tooling	111 487 002	WR - AIPL/0071	NIL	NIL	NIL
174	Hyd. Power Rig & Tooling	111 487 001	WR - AIPL/0072	NIL	NIL	NIL
175	Hyd. Power Rig & Tooling	111 487 005	WR - AIPL/0105	NIL	NIL	NIL
176	Hyd. Power Rig & Tooling	111 487 006	WR - AIPL/0106	NIL	NIL	NIL
177	Hyd. Power Rig & Tooling		WR -	NIL	NIL	NIL
178	Hyd. Power Rig & Tooling		WR -	NIL	NIL	NIL
179	Air Brake Test Rig	111 449 002	WR -	NIL	NIL	NIL
180	Dig. Inverter Based Air Plasma Cutting M/C	111 480 003	WR - 130203080	NIL	NIL	NIL

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181	Air Plasma Cutting M/C	111 480 004	WR - MJC60/5807	NIL	NIL	NIL
182	Air Plasma Cutting M/C	111 480 005	WR - MJC60/5907	NIL	NIL	NIL
183	Air Plasma Cutting M/C	111 480 006	WR - MJC60/6007	NIL	NIL	NIL
184	Air Plasma Cutting M/C	111 480 007	WR - MJC60/6107	NIL	NIL	NIL
185	Nibbing M/C	111 146 001	SP - 211	NIL	NIL	NIL
186	Laser Engraving M/C	111 499 001	WR - FB00120	NIL	116.75	13.00
187	Scrubber for Cleaning	111 472 002	WR - 051800970	NIL	NIL	NIL
188	Auto Test Bench for DV	111 449 003	WR -	NIL	NIL	NIL
189	Effluent Treatment Plant		RT - ETP/03	NIL	NIL	NIL
190	Spring Scrapping & Testing M/C 25 T	111 136 004	SP - 7596	NIL	NIL	NIL
191	Electro Magnetic Crack Detector for Coil Spring of LHB		SP - OP/ 903170/PER1	NIL	161.00	NIL
192	Screw Air Compressor 120 CFM	111 127 001	SP - SCR0003953	NIL	NIL	NIL
193	Furnace Oil Distribution System	111 199 001	SP - 001	NIL	NIL	NIL
194	Effluent Treatment Plant		SP - ETP/01	NIL	NIL	NIL
195	Effluent Treatment Plant		SP - ETP/04	NIL	NIL	NIL
196	Guillotine Shearing M/C	110 324 003	CF - 03/202	NIL	NIL	NIL
197	Screwing M/C	110 313 001	PC/CR - 107	NIL	NIL	NIL
198	Screwing M/C	110 313 004	CF - 1733	NIL	NIL	336.00
199	Screwing M/C	111 413 001	PC/WR - 284	NIL	NIL	NIL
200	Pipe Threading M/C ½" to 2"	110 313 005	CF - 3073	NIL	NIL	NIL
201	Pipe Threading M/C 15mm to 50mm dia	110 313 006	CR/CF - M854	NIL	NIL	224.50
202	Pillar Drilling M/C	110 311 003	CR/CF - 78	NIL	NIL	NIL
203	Electric Winch	110 348 001	PC/CR - 91	NIL	NIL	NIL
204	Surface Traverser 60 T		PS - 2301/PER1	90.50	70.00	NIL
205	Screw Air Compressor 160 CFM	110 827 001	PS/TLD - SCR0003557	NIL	NIL	385.00
206	Portable Air Compressor	110 727 001	PS - A23	NIL	NIL	NIL
207	Pillar Drilling M/C	110 211 001	PC/CF - 80	NIL	NIL	NIL
208	Pillar Drilling M/C	110 311 004	PC/CR - 97	NIL	NIL	NIL
209	Press Brake	110 221 001	CB - 031	NIL	318.50	NIL
210	Portable Air Compressor	110 327 007	CB - 1023	NIL	NIL	NIL

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211	Double Ended Floor Grinder	110 216 004	PC/CB = 60	NIL	NIL	NIL
212	Hydraulic Press Brake 200 T	110 221 006	NSMS - 4735	NIL	NIL	NIL
213	Centre Lathe	110 404 006	GC - 79	NIL	NIL	NIL
214	Centre Lathe	110 404 005	GC - 179	NIL	NIL	NIL
215	Centre Lathe	110 404 007	PCM - 7	NIL	NIL	NIL
216	Centre Lathe	110 404 003	PC/GC - 210	NIL	NIL	NIL
217	Centre Lathe	110 404 004	PC/GC - 226	NIL	NIL	NIL
218	Centre Lathe	110 404 010	PC/GC - 153	NIL	NIL	NIL
219	Centre Lathe	110 404 008	PER - 079	NIL	NIL	NIL
220	Centre Lathe		M&P - 89	NIL	NIL	NIL
221	Radial Drilling M/C	110 410 001	PC/GC - 220	NIL	NIL	NIL
222	Slotting M/C	110 417 003	PC/GC - 219	NIL	NIL	NIL
223	Slotting M/C	110 417 002	GC - 028	NIL	NIL	NIL
224	Universal Milling M/C	110 419 002	PC/GC - 217	NIL	NIL	NIL
225	Universal Milling M/C	110 419 001	PC/GC - 224	NIL	NIL	NIL
226	Surface Grinder	110 416 003	PC/GC - 164	NIL	NIL	NIL
227	Universal Tool Cutter Grinder	110 416 006	GC - 45	NIL	NIL	NIL
228	Circular Saw	110 425 001	GC - 06	NIL	NIL	NIL
229	P)CB Diagnostic Equipment	110 949 001	GC - 01	NIL	NIL	NIL
230	4 Wheel Truck Battery Operated		GC - 13032/309	NIL	NIL	NIL
231	Static Electronic Rail Cum Road Weigh Bridge		GC -	NIL	NIL	NIL
232	HP Cleaning M/C (H&C) 180 BAR	111 772 001	GC - 2018/03-0006	NIL	NIL	NIL
233	HP Cleaning M/C (H&C) 180 BAR	111 772 002	GC - 2018/03-0008	NIL	NIL	NIL
234	Centre Lathe	110 504 007	PCM - 35	NIL	NIL	NIL
235	Radial Drilling M/C	111 210 001	W&T - 127	NIL	NIL	NIL
236	Shaping M/C	110 517 003	PCM - 3	NIL	NIL	NIL
237	Slotting M/C	110 517 001	PCM - 26	NIL	NIL	NIL
238	Vertical Milling M/C	110 519 001	PCM - 21	NIL	NIL	NIL
239	Jib Crane Electrical Hoist	110 533 001	SP - 193	NIL	NIL	NIL
240	Pedestal Grinder	110 516 003	GC - 202	NIL	NIL	NIL
241	Grinding M/C	110 516 002	PCM - 4	NIL	NIL	NIL
242	Grinding M/C	110 516 001	PCM - 181	NIL	NIL	NIL
243	Hack Saw	110 525 001	GC - 205	NIL	NIL	NIL
244	Electric Wire Rope Hoist 0.5T	110 348 013	NMS - 411	NIL	NIL	NIL
245	Electric Chain Hoist 0.5T	110 348 014	NMS - 412	NIL	NIL	NIL
246	Electric Wire Rope Hoist 1T		NMS - 413	NIL	NIL	NIL
247	Axle Journal Turning Burnishing Lathe	111 201 004	W&T - 45/2016	NIL	NIL	NIL
248	CNC Surface Wheel Lathe	111 202 007	W&T - SWL	NIL	4.50	15.50

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249	Hydraulic Wheel Press 500T	111 203 003	W&T - 013	NIL	NIL	NIL
250	Electro Hydraulic Wheel Press 500T	111 203 004	W&T - 11000443	NIL	NIL	33.50
251	CNC Vertical Turret Lathe	111 205 001	W&T - OP/ 103950/ PER1	NIL	NIL	521.75
252	Roller Bearing Cleaning Plant	111 281 002	W&T - 738G/ PER2	NIL	35.00	124.00
253	Axle Box Cleaning Plant	111 272 007	W&T IR/ABCP/001	NIL		146.50
254	Dynamic Wheel Balancing M/C	111 251 001	W&T - 100930/PER1	NIL	49.00HU	NIL
255	Air Compressor 45 CFM	111 227 001	W&T - 1014	NIL	NIL	NIL
256	Screw Air Compressor 120 CFM	111 227 002	W&T - SCRO003955	NIL	NIL	NIL
257	Induction Heater 12 KVA	111 244 006	W&T - 006/330	NIL	NIL	NIL
258	Induction Heater 12 KVA	111 244 007	W&T - 007/331	NIL	NIL	NIL
259	Induction Heater 16 KVA	111 244 008	W&T - 261	NIL	NIL	NIL
260	Induction Heater 16 KVA	111 244 009	W&T - 262	NIL	NIL	NIL
261	Hydraulic Roller Bearing Extractor	111 279 006	W&T - 06	NIL	NIL	NIL
262	CTRB Mobile Hydraulic Puller/Installer	111 279 007	W&T - VHP/ 100/400-ML	NIL	NIL	NIL
263	High Pressure Jet Cleaning	111 235 001	W&T -	NIL	NIL	NIL
264	High Pressure Cleaning Plant	111 272 002	W&T - 002	NIL	NIL	NIL
265	High Pressure Jet Cleaning Plant (H&C)	111 272 003	W&T - 2914915	NIL	NIL	NIL
266	High Pressure Jet Cleaning Plant (H&C)	111 272 004	W&T - 2914916	NIL	NIL	NIL
267	HP Cleaning M/C (H&C) 140 BAR	111 272 005	W&T - 2016/10-0005	NIL	NIL	NIL
268	Metal Arc Disintegrator	111 209 006	W&T - 06	NIL	NIL	NIL
269	Electric Wire Rope Hoist 1T	111 149 002	W&T - 128H	NIL	NIL	NIL
270	Electric Wire Rope Hoist 2T	111 206 001	W&T - 131H	NIL	NIL	NIL
271	Electric Wire Rope Hoist 1.6T	111 203 001	W&T - 123H1	NIL	NIL	NIL
272	Electric Wire Rope Hoist 1.6T	111 203 001	W&T - 123H2	NIL	NIL	NIL
273	Electric Wire Rope Hoist 3.2T	111 203 001	W&T - 123H3	NIL	NIL	26.50
274	Electric Wire Rope Hoist 2T	111 206 002	W&T - 1194/T-05	NIL	NIL	NIL
275	Electric Wire rope Hoist 1T	111 272 001	W&T - T/06	NIL	NIL	NIL

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276	Torque Wrench Calibrator	111 249 004	W&T -	NIL	NIL	NIL
277	Scrubber For Cleaning	111 272 006	W&T - 051801047	NIL	NIL	NIL
278	Surface Roughness Tester	111 249 005	W&T - OOP056 / 00758	NIL	NIL	NIL
279	Surface roughness Tester	111 249 006	W&T - OOP068 / 01409	NIL	NIL	NIL
280	Hydraulic Press	110 321 002	PC/CR - 75	NIL	NIL	NIL
281	Horizontal Tensile Testing M/C	111 149 007	LBR - HTTM /09	NIL	NIL	NIL
282	Electro Magnetic Crack Detector	111 553 001	NCR - 23/2013	NIL	NIL	NIL
283	EOT Crane 5T	111 031 003	PC/SM - 184	NIL	NIL	NIL
284	EOT Crane 15/5T	110 332 009	CR - 12/15/2013	NIL	5.00	7.00
285	EOT Crane 15/5T	110 332 010	CR - 13/ 15/2013	NIL	NIL	NIL
286	EOT Crane 10T	111 031 004	SM - 15/ 10/2014	NIL	NIL	NIL
287	Single Girder Crane 1T		DLX - 04	NIL	NIL	NIL
288	Single Girder Crane 1T		DLX - 05	NIL	NIL	47.50
289	Electric Hoist 3T	110 339 007	CR - 2603/1	NIL	NIL	NIL
290	Electric Hoist 3T	110 339 008	CR - 2603/2	NIL	NIL	NIL
291	Portable Air Compressor	110 327 009	AB/SAB - A21	NIL	NIL	NIL
292	Air Compressor 45 CFM	111 627 001	LBR - 1013	NIL	NIL	NIL
293	Air Compressor 45 CFM	110 327 010	CR - 1017	NIL	5.50	4.50
294	Screw Air Compressor 160 CFM	110 327 011	CR/AB - SCR0003559	NIL	NIL	NIL
295	Screw air Compressor 120 CFM	110 327 012	CR - SCR0003954	NIL	NIL	NIL
296	Screw Air Compressor 300 CFM		CR/LBR - SCR0004483	NIL	NIL	NIL
297	Portable Air Compressor	110 327 008	CR - 1024	NIL	NIL	NIL
298	Portable Air Compressor	110 127 001	BTC -	NIL	NIL	NIL
299	Mini Air Compressor		CR - M/22139	NIL	NIL	NIL
300	Capstan Lathe	110 105 001	PC - BTC/1	NIL	NIL	NIL
301	Double End Floor Grinder	110 316 003	PC/CR - 110	NIL	NIL	NIL
302	Pedastal Grinder	110 316 005	CR - 016	NIL	NIL	NIL
303	Single Car Test Rig	110 349 007	AB - 07	NIL	NIL	NIL
304	Test Rig For Distributor Valve	110 349 009	AB - 09/002	NIL	NIL	NIL
305	Shock Absorber Testing M/C	110 349 006	CR - 018	NIL	NIL	NIL

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306	Single Car Test Rig	110 349 014	CR/AB - 1123	NIL	NIL	NIL
307	Single Car Test Rig	110 349 013	CR/AB - 1122	NIL	NIL	NIL
308	Single Car Test Rig	110 349 015	CR/AB - 1124	NIL	NIL	NIL
309	Single Car Test Rig	110 349 016	CR/AB - 1125	NIL	NIL	NIL
310	Single Car Test Rig	110 349 017	CR/AB - 1126	NIL	NIL	NIL
311	High Pressure Water Blaster	110 335 001	CR - 01	NIL	NIL	NIL
312	High Pressure Cleaning M/C (H&C) 140 BAR	110 372 001	CR - 2016/10 - 0004	NIL	NIL	NIL
313	Digital Inverter Based Air Plasma Cutting M/C	110 380 003	HCR - 130203079	NIL	NIL	NIL
314	Air Plasma Cutting M/C	110 180 001	BTC - MJC60/5707	NIL	NIL	NIL
315	Welding Trainer	110 191 001	BTC -	NIL	NIL	NIL
316	HP Fire Fighting System	110 488 002	GC - 943611	NIL	NIL	NIL
317	Effluent Treatment Plant		LBR - ETP/02	NIL	NIL	NIL
318	Effluent Treatment Plant		Canteen - STP	NIL	NIL	NIL
319	Fume Killer	111 899 001	HCR - 6059	NIL	NIL	NIL
320	Electric Operated Stacker	110 329 001	CR -	NIL	NIL	NIL
321	Power Hack Saw	110 325 005	CR/AB -	NIL	NIL	NIL
322	Power Hack Saw	110 325 006	CR/AB -	NIL	NIL	NIL
323	Scrubber For Cleaning	110 372 002	CR/BR - 041800826	NIL	NIL	NIL
324	Scrubber For Cleaning	110 372 001	CR/LBR - 041800879	NIL	NIL	NIL
325	AJTBLATHE	111 201 004	W&T-45/2016	NIL	NIL	249.75

