

JFF HEAVY ENGINEERING & FABRICATION

Master Plant Machinery, Lifting Systems & Production Equipment Schedule

Document Ref: JFF-EQ-2026

Plant Location: Heavy Fabrication Yard

Total Fleet: 101 Units (33 Line Items)

Status: Active & Calibrated

101

TOTAL EQUIPMENT FLEET

33

EQUIPMENT LINE ITEMS

32 MT

MAX CRANE LIFT RATING

57

WELDING & THERMAL UNITS

Heavy Lifting & Overhead Crane Fleet

9 Line Items • 18 Total Units

#	ITEM DESCRIPTION & CAPACITY / BRAND SPECIFICATION	ASSET CATEGORY	QUANTITY
01	FARANA 25TON Hydraulic Mobile Crane	Lifting & Material Handling	1 No
02	FARANA 23TON (Brand: Escorts)	Lifting & Material Handling	1 No
03	HYDRA 16TON (Brand: Indo Power)	Lifting & Material Handling	1 No
04	HYDRA 14TON (Brand: Escorts / Others)	Lifting & Material Handling	2 Nos
05	32MT EOT Crane (Make: Jaso)	Lifting & Material Handling	1 No
06	20TON EOT Crane (Make: Jaso / Shiva Ferous)	Lifting & Material Handling	2 Nos
07	10TON EOT Crane (Brand: Venus Eng)	Lifting & Material Handling	2 Nos
08	2TON EOT Crane	Lifting & Material Handling	1 No
09	Manual Winch Machine	Lifting & Material Handling	7 Nos
Category Subtotal:			18 Nos

Welding, Submerged Arc, Metallizing & Heating Equipment

6 Line Items • 57 Total Units

#	ITEM DESCRIPTION & CAPACITY / BRAND SPECIFICATION	ASSET CATEGORY	QUANTITY
10	Arc Welding ARC 400HD (Brand: Ralli Wolf)	Welding & Heating	24 Nos
11	MIG Welding CHAMP MIG 400 (Brand: Ador)	Welding & Heating	21 Nos
12	SAW Machine CPRA 1250i + Tractor (Brand: ESAB)	Welding & Heating	4 Nos
13	Metallizing Wire Flame Spray Torch (MG 001)	Welding & Heating	4 Nos
14	Automatic Beam Welding (Brand: Primo)	Welding & Heating	2 Nos
15	Stud Welding TWE-25 (Brand: Trust Weld)	Welding & Heating	2 Nos
Category Subtotal:			57 Nos

Drilling, Cutting, Turning & Plate Bending Machinery

6 Line Items • 13 Total Units

#	ITEM DESCRIPTION & CAPACITY / BRAND SPECIFICATION	ASSET CATEGORY	QUANTITY
16	Radial Drill Machine	Machining & Fabrication	8 Nos
17	CNC Cutting & Drilling Machine	Machining & Fabrication	1 No
18	Lathe Machine (Brand: Rajindra)	Machining & Fabrication	1 No
19	END Milling Machine (Brand: Karam)	Machining & Fabrication	1 No
20	PS Plate Bending Machine	Machining & Fabrication	1 No
21	Press Machine (PS Plate)	Machining & Fabrication	1 No
Category Subtotal:			13 Nos

Industrial Air Compression & Pneumatic Systems			7 Line Items • 8 Total Units
#	ITEM DESCRIPTION & CAPACITY / BRAND SPECIFICATION	ASSET CATEGORY	QUANTITY
22	CP Compressor 75HP (Brand: Chicago Pneumatics)	Air Compressors & Systems	2 Nos
23	ELGI Electric Air Compressor (EG 75-9 Skid)	Air Compressors & Systems	1 No
24	Diesel Compressor 86HP (Brand: Atlas Copco)	Air Compressors & Systems	1 No
25	Diesel Compressor Base (Brand: Atlas Copco)	Air Compressors & Systems	1 No
26	Air Compressor 15HP (Brand: ELGI)	Air Compressors & Systems	1 No
27	CP Compressor 7.5HP (Brand: Chicago Pneumatics)	Air Compressors & Systems	1 No
28	Tank for Air Compressor	Air Compressors & Systems	1 No
Category Subtotal:			8 Nos

Beam Processing, DG Power Backup & Heavy Utilities			5 Line Items • 5 Total Units
#	ITEM DESCRIPTION & CAPACITY / BRAND SPECIFICATION	ASSET CATEGORY	QUANTITY
29	Beam Straightening Machine (Brand: Primo)	Specialized Equipment & Power	1 No
30	Mixture Machine	Specialized Equipment & Power	1 No
31	KOEL DG Set 320KV	Specialized Equipment & Power	1 No
32	Kirloskar DG Set 125KV	Specialized Equipment & Power	1 No
Category Subtotal:			4Nos

DEPARTMENTAL ASSET DISTRIBUTION

Departmental Assets Distribution	57 Nos	56.4%
Lifting & Material Handling	9 Types 18 Nos	17.8%
Machining & Fabrication	6 Types 13 Nos	12.9%
Industrial Air Compressors	7 Types 8 Nos	7.9%
Specialized & Heavy Utilities	5 Types 5 Nos	5.0%
TOTAL PLANT ASSETS	33 Types 101 Nos	100.0%

KEY MACHINERY HIGHLIGHTS & POWER

Max Overhead Crane:	32 MT EOT Crane (Make: Jaso)
Mobile Lifting Units:	FARANA (25T & 23T), HYDRA (16T & 14T)
Automated Welding:	SAW CPRA 1250i + Primo Beam Welder
Standby Power:	445 kVA Total (KOEL 320 kVA + Kirloskar 125 kVA)
Pneumatic Utilities:	Electric & Diesel Compressors (Up to 86 HP)
Plate Processing:	CNC Cutting & PS Plate Bending / Press

Plant & Machinery Compliance Statement:

- All EOT cranes, Farana, and Hydra mobile units maintain active Third-Party Inspection (TPI) & proof load testing clearances.
- Welding equipment (SAW, MIG, Arc, Stud) is calibrated as per ASME Section IX / AWS D1.1 structural fabrication standards.
- Dual diesel generator sets (320 kVA KOEL + 125 kVA Kirloskar) guarantee 100% operational redundancy.

AUTHORISED SIGNATORY

Plant Manager / Asset In-Charge

JFF Heavy Engineering Works

 LANT INFRASTRUCTURE & MACHINERY DOSSIER

JYOTI FORGE & FABRICATION

Comprehensive Overview of Plant Facilities, Heavy Machinery, Specialized Fabrication Bays & Quality
Infrastructure

1. Template Layout Area

The Template Layout Area is a leveled steel lofting bed used for 1:1 scale marking, template preparation, checking, and verifying dimensions of fabrication components prior to manufacturing.

It ensures supreme geometric accuracy in layout preparation and strict compliance with approved fabrication drawings.

Size: 20 x 50 Meters

1 Scale Verification



2. CNC Cutting & Drilling

The primary cutting line features an advanced CNC cutting cum drilling machine for precision plate contouring, multi-torch oxy-fuel profiling, and high-accuracy hole drilling.

Equipped with computerized trajectory controls ensuring minimal heat distortion and tight tolerances across heavy plates.

Make: PROARC

Bed Capacity: 3x15 Meters



Beam Straightening Facility

The heavy Beam Straightening Machine corrects welding-induced distortion, camber deviations, and alignment offsets in fabricated steel members. Critical for guaranteeing dimensional fidelity, flange parallelism, and structural quality compliance per RDSO & AWS specifications.

Make: PRIMO

Distortion & Flange Alignment



Auto Beam Welding Line

The Automatic Beam Welding Machine is engineered for submerged-arc twin-fillet welding of heavy built-up H-beams, I-sections, and box girders. Features integrated roller conveyors ensuring uniform deep penetration weld quality, elevated productivity, and minimal manual intervention.

Make: PRIMO

Heavy Built-up Girders



Heavy SAW & Milling Fleet

Equipped with ESAB Submerged Arc Welding tractors (CPRA 1250i) for heavy girder longitudinal joints, backed by 50 kg flux drying ovens. Supported by a heavy-duty Karam End Milling Machine and Rajindra Lathe for end facing, joint beveling, and bearing seat alignment.

4x SAW CPRA 1250i (ESAB)

Karam End Milling



3. Surface Blasting Shop

Dedicated abrasive grit and sand blasting yard equipped with high-pressure pneumatic supply for complete removal of mill scale, rust, and surface contaminants.

Achieves an anchor surface profile complying strictly with ISO 8501-1 (Sa 2.5) for high-performance protective coating adhesion.

Standard: Sa 2.5 Cleanliness

Abrasive Grit Blasting



4. Metallizing & Painting

Covered, well-ventilated coating bay equipped with thermal wire flame spray torches (MG 001) for zinc/aluminum metallizing and airless spray units for multi-coat systems.

Serviced by mobile hydra cranes for efficient handling of coated girders and bridge structural members.

Wire Flame Spray (MG 001)

Epoxy / PU Systems



5. Assembly & Fit-Up Area

Full Trial Assembly

Large-span assembly bay dedicated to shop trial assembly of bridge spans, open-web trusses, and built-up girders to verify camber, splice joint alignment, and pre-assembly dimensional accuracy.



6. Stacking & Storage Yard

Segregated hard-standing stacking yards equipped with concrete dunnage and heavy handling cranes for raw plates, hot-rolled sections, and finished girders.

Maintains strict plate lot identification, heat number traceability, and systematic dispatch staging.

Raw Material Lot Traceability

Finished Goods Dispatch Bay

