

ODISHA PREFAB ENGINEERING PRIVATE LIMITED								
SCHEDULE OF TECHNICAL REQUIREMENTS FOR FABRICATION OF STEEL GIRDERS(MACHINERY & PLANTS) ALONG WITH ADDITINAL GENERAL AND INFRASTRUCTURAL REQUIREMENTS								
SL NO	SCH NO	ITEM DESCRIPTION	QTY	MAKE	MODEL NO	CAPACITY	YEAR OF MANUFACTURE	SERIAL NO.
1	5.1	CNC CUTTING SYSTEM	1	MESSER	D-3040		2018	2810120
2	5.3	CNC DRILLING MACHINE	1	WUXI HAULIAN	ZK 5550 (1520)	2000mm X 1500mm, Max Dia : 50mm	2020	314
3	5.4/5.12	SAND BLASTING MACHINE & METALIZING GUN	1	MEC	SPRAJET-88-HS-LPG FLAME SPRAY SYSTEM		2020	88090001
4	5.5	GANTRY CRANE	1	AP CRANE	ND11211	20 / 5 MT	2020	19060
5	5.5	HYDRAULIC MOBILE CRANE	1	STANDARD CORP.	HMC - 15000	15 MT	2016	4100TLOP001713
6	5.4	COMPRESSOR	1	CHICAGO PNEUMATIC	CPS - 325	19.74 LTR	2012	V09081593
7	5.7	RADIAL DRILL MACHINE	1	MARATHON	NF-264	DIA UP TO-50 MM	2018	2589
8	5.8	FACE MILLING MACHINE	1	WUXI HAULIAN	DX 1520 B	1500mm X 2000mm	2020	559
9	5.9	H BEAM FLANGE HYDRAULIC STRAIGHTENING M/C	1	WUXI HAULIAN	YJ - 60 C	WIDTH : 300- 1000mm, Th-8-60mm	2020	1017
10	5.10	CORE CUT DRILL MACHINE	1	EIBENSTOCK	KBM-50-2	DIA UP TO-50 MM	2018	280690
11	5.10	AG-7 GRINDING MACHINE	2	BOSCH			2018	710221128, 710221129
12	5.10	AG-5 GRINDING MACHINE	1	BOSCH			2018	3601C880F2
13	5.10	AG-4 GRINDING MACHINE	1	BOSCH			2018	80356884
14	5.10	PENCIL GRINDING MACHINE	1	BOSCH	GG53000L		2018	812094974
15	5.10	BENCH GRINDER	1	SHRIRAM				317
16	5.10	CHIPPING MACHINE	1	BOSCH		11 KG	2018	GBH-8-45DV
17	5.10	DIGITAL ELCO METER	1		CHY-115			
18	5.11	TOTAL STATION	1	TOPCON SOKIA				
19	5.13	MOU WITH RAIPUR METALLURGICAL LAB, RAIPUR, CG						
20	5.14/5.16(g)	MOU WITH PERFECT INSPECTION SERVICES, BHILAI, CG						
21	5.16(a)	ARC WELDING MACHINE	2	ESAB	ASTER-ARC-400		2018	INP410317/18
22	5.16(b)	MIG WELDING MACHINE SET	2	ESAB	AUTO K-400		2018	EIS-15-SL-8115,8107
23	5.16(c)	AUTOMATIC SAW WELDING MACHINE	2	ESAB	CPRA-1200		2018	INSA90R6567/6568
24	5.16(d)	WELDING MANIPULATORS	2		12 MTRS 45 DEGREE BED			
25	5.16(f)	STUD WELDING MACHINE	1	PANCHAVAKRAM	RST/3150/3	DIA UP TO-25 MM	2019	N91119148
26	5.16(h)	TONGUE TESTER	1	WACO 2019				313792
27	5.16(i)	WELDING GAUGE	3	KRISTEEL	AUWG-M5-2630		2018	
28		PUG CUTTING MACHINE SET	1	ESAB			2017	EIS09PC-0626
29		PNEUMATIC YOKE RIVETING MACHINE	1					
30		HAND CUTTING SET	2	ASHAARE	CM/L-5658484			
31		MOTHER OVEN	1	KOTAK MACHINE & TOOL		50 KG	2018	386-1
32		MOTHER OVEN	1	SWASTIK		25 KG	2018	
33		PORTABLE OVEN	1				2018	
34		HYDRULIK JACK	1	HYDROLIK		100 MT		
35		HYDRULIK JACK	1	HYDRO MECH		50 MT		
36	5.6	COMPRESSOR TORQUING MACHINE SET	1	ELGI	TS07LB	DIA UP TO-50 MM	2020	STLE665135
37		MANNUAL TORQUING MACHINE	2	TORQUE MASTER	TM500 / TM600	135 - 675 Nm / 290 - 815 Nm	2019	
38		ELECTRICAL TORQUING MACHINE	1	BOSCH	GDS 30	DIA UP TO-50 MM	2018	PA6GF35

39		ELECTRICAL TORQUING MACHINE	2	BOLTORQUE	BT-EC15	500-1500 Nm	2016, 2017	1606034-3
40		VERNIER SCALIPER	1	AEROSPSE		300 MM		
41		MICRO ETCHING DYE-PNETRANT KIT	1					
42		D SHACKLE-40 MT	2	USHA MATIRN		40 MT		
43		WIRE ROPE SLING-40 MT(14 MTR)	2	USHA MATIRN		40 MT		
44		WIRE ROPE SLING-15 MT(8 MTR)	2	USHA MATIRN		15 MT		
45		D SHACKLE-15 MT	2	USHA MATIRN		15 MT		
46		D SHACKLE-5 MT	4	USHA MATIRN		5 MT		
47		WIRE ROPE SLING-20 MM(6 MTR)	2	USHA MATIRN		10 MT		
48		WIRE ROPE SLING-16 MM(3 MTR)	2	USHA MATIRN		5 MT		
49		BELT SLING(8 MTR)	2			5 MT		
50		CHAIN PULY	1	INDO LIFT	VIT50	5 MT	2019	
51		SURFACE ROUGHNESS TESTER	3	GENEX	RT-8100		2026	B0FH58K52N



### TEMPLATE LAYOUT AREA

Layout of girder done here. All the layout of open web girder, bow string girder & composite girder done here.



### FABRICATION WORKSHOP

A steel fabrication workshop is a specialized industrial facility that transforms raw steel materials (plates, beams, tubes) into finished structural components and parts through cutting, bending, welding, and assembly. These shops utilize CNC technology, skilled labor, and stringent quality control to produce infrastructure, machinery, and custom steel products.

This is the fabrication area, where various type of cutting, drilling, marking, fitting & welding is done along with all types of girder fabrication with machining job are executed.



### TRIAL ASSEMBLY AREA

In this place, various types of Girders like **Bow String Girder**, **Open Web Girder**, **Composite Girder** are assembled. After fabrication, one can check the accuracy, dimension and fittings in Trial Assembly.



### COMPOSITE GIRDER TRIAL ASSEMBLY

Both Railway Composite Girder & State Govt. Composite Girder Assembled Here.



### **BLASTING & PAINTING SHED**

A blasting and painting shed is a specialized, enclosed industrial environment designed for surface preparation and the application of protective coatings to metal components, such as structural steel, machinery parts, or ship sections. It facilitates the cleaning, rusting, and finishing of components, often serving as a one-stop-shop for sandblasting (or shot blasting) followed by spray painting and drying.

After blasting with sand, metalizing is done from Aluminium Wire and after that Wash Primer & Painting is being done.



### **MATERIAL STACKING AREA**

Raw material & finished product stacking are done here. All the raw material procured from JINDAL, SAIL, VIZAG Steel and TATA Steel are also stacked here.



### **MIG WELDING MACHINE**

MIG (Metal Inert Gas) welding machines are versatile, constant-voltage power sources designed for fast, high-quality, and easy-to-learn fabrication using a continuously fed wire electrode. They are commonly used for welding steel, aluminum, and stainless steel in industries ranging from automotive to heavy fabrication.

Here various types of welding like Fillet welding, Butt welding are done.

Co<sub>2</sub> used as shielding gas in MIG welding. Generally 1.2 mm MIG wire is used in his machine.



### STUD WELDING MACHINE

A stud welding machine is a specialized, fast-acting welding tool that joins metal fasteners (studs) to a workpiece, creating strong, one-sided, permanent, and leak-proof bonds without holes or back access. It uses an electric arc to instantly melt the stud tip and base surface. All the shear stud used in composite girder & bow string girder are welded by this machine.



### BEAM STRAIGHTENING MACHINE

A beam straightening machine (specifically H/I-beam flange straighteners) is an industrial device used to correct deformations and distortions in steel beams, particularly flange warping caused by welding. Using hydraulic pressure, these machines deliver high-precision straightening of flanges, enhancing productivity in structural fabrication and construction.



### SAW WELDING MACHINE

Submerged Arc Welding (SAW) machines are high-productivity, automatic welding systems used for heavy-duty industrial fabrication. They create deep-penetration, high-quality welds by feeding a continuous wire electrode under a blanket of granular flux, typically on steel plates, pipes, and beams.



### CNC DRILLING MACHINE

CNC drilling machines are automated, computer-controlled tools designed for high-precision, repetitive hole-making tasks, including drilling, tapping, and reaming. They utilize servo motors, industrial controllers, and sturdy construction to deliver accuracy in industries such as metal fabrication, heavy engineering, and automotive.



### **FACE MILLING MACHINE**

Face milling is a machining process that uses a rotating cutter, usually with replaceable carbide inserts, to create flat surfaces, primarily on top of a workpiece. The cutter axis is perpendicular to the surface being machined, making it ideal for high-speed, high-volume, and precise material removal for, say, creating flat, shiny surfaces.



## CNC CUTTING MACHINE

A CNC (Computer Numerical Control) cutting machine is an automated tool that uses computer programming to precisely guide cutting instruments—such as lasers, plasma torches, or routers—to shape materials. It converts digital designs (CAD) into automated movements, enhancing precision, speed, and consistency over manual cutting.