

SUBMERGED ARC WELDING SYSTEMS

THYRISTOR BASED



CONSTRUCTION :

A) Welding Head : The welding head consists of the wire feed mechanism incorporating a high torque DC geared motor, wire straightening & feed roller, welding tip, vertical adjustment mechanism, and a flux hopper (in case of Submerged Arc Version).

The welding head can be adjusted transversely & also vertically to bring the welding tip in correct position. It can swivel upto 45degree for fillet seams in flat position.

B) Tractor Carriage : Fabricated from sheet steel with four wheels, either suitably insulated steel wheels for travelling on rails or rubber tyred wheels for travelling on the job.

The trolley is driven by a high torque DC geared motor with the help of chain & sprocket arrangement, giving power to the four wheels, thereby avoiding any slipping of the wheels, the trolley supports the cross beam fitted with welding head on one side & control box, on the opposite side, which can either be fixed on the top of the trolley or at the bottom of the trolley with the help of suitable suspension arrangement.

A suitable clutch arrangement disengages the geared motor for manual pushing.

Controls Panel : Thyristor control for traction & wire feed speed is offered. The equipment consists of:

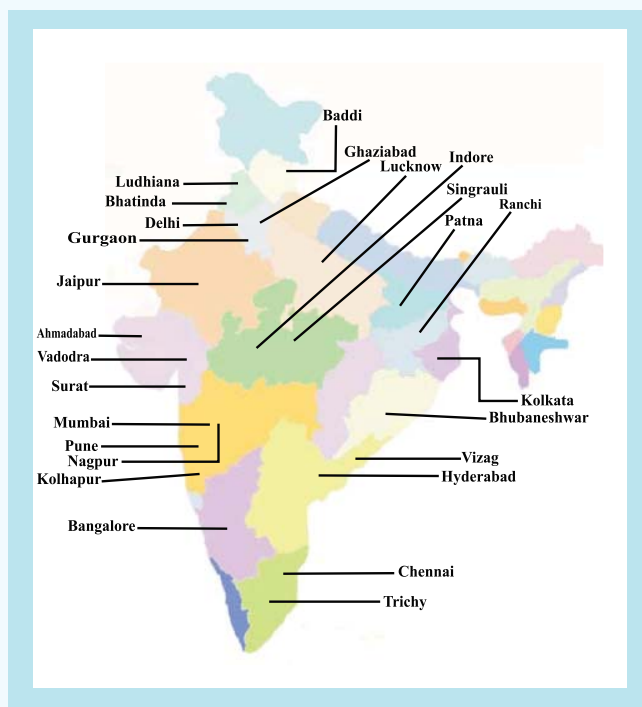
Controls Panel : It is mounted on the other end of the cross beam opposite to the welding head & can be fixed at any convenient angle for easy reading of parameters & incorporates :

- Meters for reading welding Current, Voltage & Carriage Speed.
- Potentiometer for wire feed & carriage speed adjustment.
- Push buttons for upward & downward inching of the electrode wire.
- Switches for Start & Stop of Welding.
- Forward, off & reverse movement of the carriage.
- The panel for Thyristor Control equipment includes PCB's for Wire Feed & carriage speed controls (Thyristor Control System) D.C. supply voltage for motors, control fuses & switching socket.

TECHNICAL SPECIFICATION

MODEL	TD - SA800	TD - SA1000	TD - SA1200	TD - SA1600		
RATED INPUT SUPPLY	————— 3PH, 415 VOLTS +/-10%, 50HZ —————				WELDING SPEED	: 0.2 to 1.5M / MIN
MAXI INPUT POWER, KVA	61	77	105	126	WIRE FEED SPEED WITH 40MM DIA ROLLER	: 1.8 to 7.5M / MIN
RATED OUTPUT CURRENT @ 60% DUTY CYCLE AMPS	800	1000	1200	1600	WIRE DIAMETER	: 2 to 6.0MM
RATED OUTPUT CURRENT @ 100% DUTY CYCLE AMPS	616	770	925	1540	MAX SLOPE FROM HORIZONTAL PLANE	: 15 DEGREE
OUTPUT CURRENT RANGE, AMPS.	50-800	60-1000	80-1200	100-1600	CAPACITY OF FLUX CONTAINER	: 6 KGS.
MAX OPEN CIRCUIT VOLTAGE, VOLTS	56	56	60	60	WELDING HEAD ADJUSTMENT	
RATED LOAD VOLTAGE, V	20-50	20-50	20-50	20-50	VERTICAL	: 170MM.
WINDING INSULATION	————— CLASS F/H —————				HORIZONTAL - Transverse to WELD SEAM	: 70MM.
COOLING	————— FORCED FAN COOLED —————				ANGULAR DISPLACEMENT	
					ALONG THE VERTICAL AXIS	: 360 DEGREES.
					VERTICAL PLANE TRANSVERSE TO WELD SEAM	: 45 DEGREES.
					VERTICAL PLANE PARALLEL TO WELD SEAM	: 45 DEGREES.

Technical specifications are subjected to change because of continuous upgradation of products for better performance.



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