



LIBERTY

STEEL

Structural Hollow Sections:

UOE Double Submerged Arc Welded (DSAW) SHS

Liberty's Hartlepool 42" DSAW mill employs the well proven UOE method of pipe manufacture featuring the world's strongest crimp and O-press combination.

MEMBER OF



UOE Double Submerged Arc Welded (DSAW) SHS

EN 10219/EN 10210



UOE DSAW mill process

Our UOE DSAW mill process ensures tubular properties which meet the requirements of a wide number of grades of EN 10219 (Cold Formed Structural Hollow Sections).

Following double submerged arc welding, the tubular is mechanically expanded and can be produced in a wide range of sizes. We are one of the few manufacturers operating today capable of forming as low as 16 inch (406.4mm) and up to 42 inch (1066.8mm) outside diameter DSAW pipe.

With the option to source plate either from Liberty House Group's own plate mills or

from other quality suppliers, Liberty Pipes 42" Mill is able to provide the best technical solution to meet customers' bespoke project or stock requirements. This highest quality feedstock and the achievement of extremely tight tolerances to aid circumferential welding contribute to the outstanding performance of our end product.

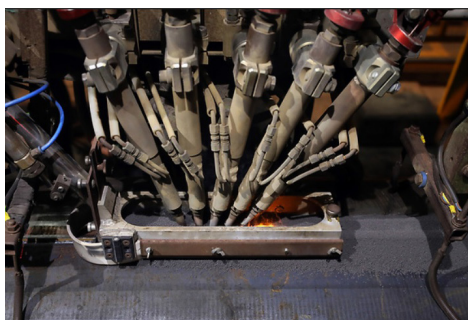
Weld seam ultrasonic testing used modern, phased array techniques and x-ray radiography (prior to expansion and post-expansion) are among a battery of tests incorporated in the process to ensure the integrity of the tubular.

Properties and performance:

- Consistent size and shape control in excess of the requirements of EN 10219 and EN 10210
- Excellent weld toughness (with MLH and NLH grades available).
- High quality surface condition
- High integrity weld non-destructive inspection, with capability far in excess of EN 10219/10210

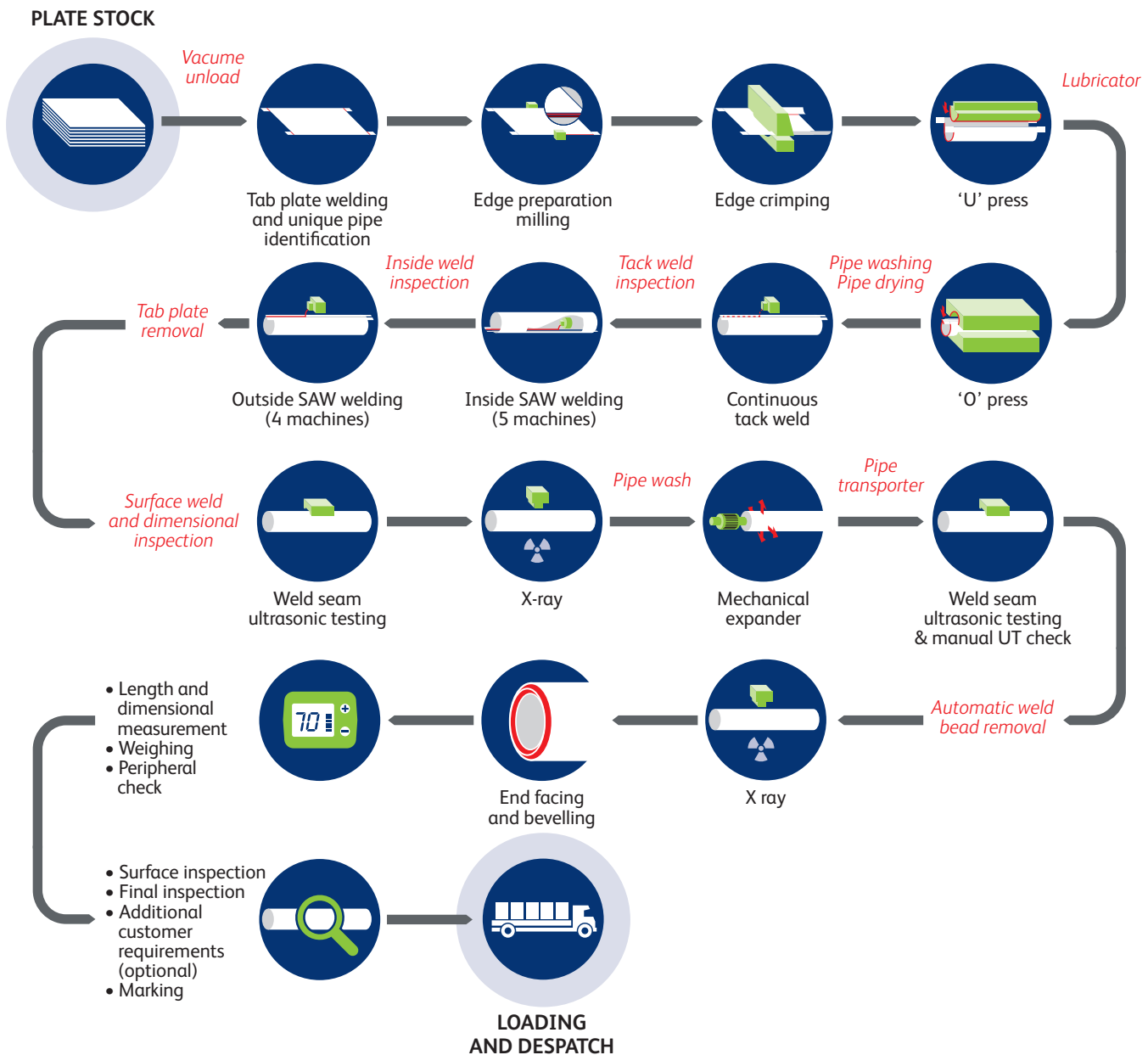
Benefits:

- Extensive choice of outside diameter and wall thickness combinations
- Thick wall tubular able to be welded in a single pass per side
- Fast size changes within industrial scale production to meet project demands, allowing smaller quantities to be considered when compared with typical offerings within the industry
- Option for profiling/saddle cutting of tubular ends using 6-axis profile burning machine
- Tight length range control (exact lengths)
- Girth welding for extended lengths
- Available roofed space with OHCs for ancillary sub-contracting work to be carried out
- Hot finished tubulars to EN 10210 are available using either on-site furnacing or sub-contracted locally



UOE DSAW pipe mill process route

The below schematic details the process route employed by the 42" SAW Mill:



Approvals & Accreditations

The 42" Mill has a full suite of approvals and accreditations by independent third parties necessary to supply material into the oil and gas sector:

Area	Approvals
Quality Management System	ISO 9001, ISO 29001
Welding Control Systems	ISO 3834-2
Health and Safety Management System	OHSAS 18001
Environmental Management System	ISO 14001
Product Licenses	EN 1090-2

42" SAW Mill grades and sizes

The 42" SAW Mill can produce a wide size of grades and sizes, as detailed below;

42" UOE SAW Mill		Diameter (mm)													
		406.4	457.2	508	558.8	609.6	660.4	711.2	762	812.8	863.6	914.4	965.2	1016	1066.8
Wall Thickness (mm)	8														
	9														
	10														
	11														
	12														
	13														
	14														
	15														
	16														
	17														
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- Available grades: S275J0H, S275J2H, S355J0H, S355J2H, S355K2H, S275NH, S275NLH, S355NH, S355NLH, S275MH, S275MLH, S355MH, S355MLH, S420MH, S420MLH, S460MH, S460MLH.
- Piece weight restricted to 12tonnes; please note that some sizes are based on < 12.2m mean length. If piece weight exceeds 12tonnes, small quantities may be possible - please check with mill.
- Some capabilities are based on < 12m nominal lengths due to pressing force required; at peripheries of capability (within 3mm) always check direct with mill.
- All forming is cold, with subsequent mechanical expansion. EN 10210 material is available through on-site heat treatment or heat treated by an approved sub-contractor.
- Feedstock condition is N, NR or TM.
- Maximum length is 12.8m; Minimum length is typically 10.0m, but down to 9.25m is occasionally available dependent on specification. Greater lengths are available via girth welding/jointing facility.

Up to S460 strength (equivalent to X65)
Strength levels from S355 to S460

LIBERTY STEEL HARTLEPOOL

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