Abbey PIPEWORK FABRICATORS

TATA

USE OF TATA UK-HOT-PART 2 CARBON STEEL TUBES

WE USE TATA STEEL UK-HOT PART-2 TUBES FOR COMPLIANCE, SUSTAINABILITY AND PERFORMANCE BENEFITS

We have many years' experience working with Tata Steel and fabricating with their UK manufactured INSTALL PLUS 235 and INLINE 265 Hot-finished Part-2 carbon steel tubes

Guarantees

	TATA STEEL	OTHERS
Traceable & consistent UK 'melt and pour' steel	✓	✗
UK-Hot, robust, high pressure & temps, extra testing for +40 yr service, 85um min galvy for +100yrs	✓	✗
No Russian feedstock or raw materials	✓	?

Support

	TATA STEEL	OTHERS
UK commercial support	✓	✗
Dedicated technical, specification, value engineering & BISPA assistance	✓	✗
UK technical responsiveness and immediate feet on the ground QA	✓	✗

Compliance

	TATA STEEL	OTHERS
Extensive UK track record for integrity, performance & product data	✓	?
Correct product certification and 3rd party approvals	✓	?
Validated for a wide range of application uses	✓	?

Sustainability

	TATA STEEL	OTHERS
Sustainable – low carbon UK steel options	✓	✗
Short UK supply legs for embodied carbon benefits	✓	✗
BES6001, ethical, decarbonisation, green and responsible policies	✓	✗

UK-HOT PART-2 CARBON STEEL TUBES ARE **TECHNICALLY SUPERIOR** COMPARED TO IMPORTED COLD-FORMED PART-1

We use Tata Steel's UK Hot Part-2 carbon steel tubes to reduce project risks and satisfy application temperature, pressure, CPR and PED requirements

Advantages of hot-finished (Part-2 GH grade) tubes

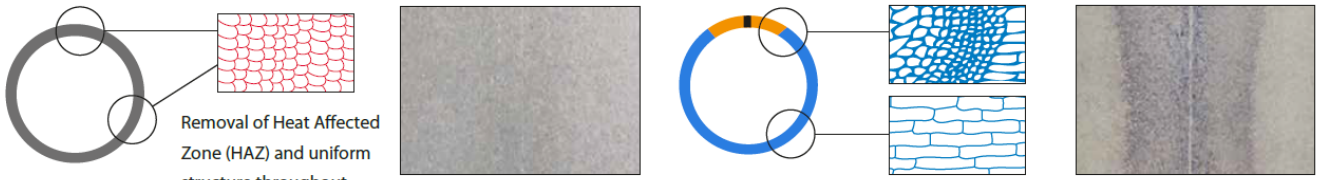
Our hot-finished tubes have no Heat Affected Zone (HAZ), this is removed during hot-manufacturing, resulting in a superior product having:

- An ordered and consistent microstructure
- No internal stress that can promote cracking
- Consistent and reliable mechanical properties
- Improved structural integrity and ductility
- Improved and consistent toughness
- Higher pressure integrity
- Greater factor of safety
- No loss of strength during additional welding or heating
- Improved performance against corrosion
- Ability to be bent to tighter radii without splitting, creasing or collapsing

Disadvantages of cold-formed (Part-1 TR1 grade) tubes

Cold-formed tubes contain a Heat Affected Zone (HAZ) around the weld-seam, this is an area of weakness, in addition cold-formed tubes also have:

- An inconsistent microstructure
- Pockets of stress that can promote cracking
- Inconsistencies in mechanical properties and strength
- Poorer toughness than the tube body
- Increased risk of splitting
- Poorer pressure integrity
- Reduced performance against corrosion
- Poorer bending abilities
- A maximum application temperature of 50°C
- No compliance with the PED (cold Part-1-TR1 tubes do not meet the essential technical requirements of the Directive)



Removal of Heat Affected Zone (HAZ) and uniform structure throughout the hot tube

NOT ALL TUBES ARE THE SAME, SO ITS IMPORTANT TO USE THE CORRECT ONES TO REDUCE PROJECT RISKS

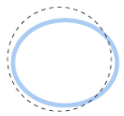
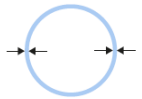
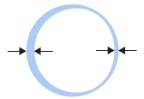
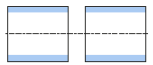
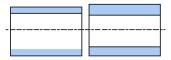
Tata Steel's UK Hot-finished Part-2 carbon steel tubes can also be used as an alternative to comparable seamless products, delivering a range of technical advantages

UK-hot vs imported cold

Top 10 key points

	Hot	Cold
Is the HAZ (Heat Affected Zone) removed	Yes	No
Is the weld seam stress free as a result of heat treatment	Yes	No
Is the tube more ductile, allowing for better bending, threading etc.	Yes	No
Can I be sure of consistent mechanical properties	Yes	No
Can I satisfy higher application temperatures above 50°C	Yes	No
Is the tube also tested for lower temperature applications	Yes	No
Are mechanical properties consistent when re-welding the tube	Yes	No
Does the tube satisfy the essential requirements of the PED	Yes	No
Is the tube UK manufactured and fully traceable	Yes	No
Is the tube more resistance to corrosion	Yes	No

UK-welded vs imported seamless

	Advantages of HFW Welded	Disadvantages of Seamless
Ovality	 Consistent roundness	 Out of roundness
Wall	 Consistent thickness	 Inconsistent thickness
End matching	 Consistent	 Inconsistent
Length tolerances	 Fixed length as standard (mm)	 Random length as standard (mm)

CONTACT US TO LEARN MORE ABOUT OUR PIPEWORK AND FABRICATION ACTIVITIES

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