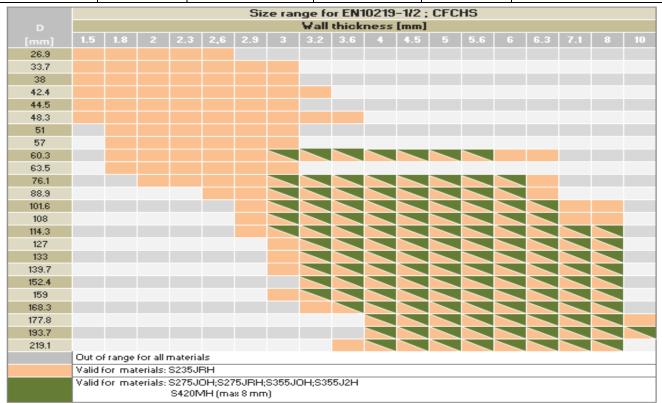


PRODUCTION PROGRAM OF ARCELORMITTAL TUBULAR PRODUCTS IASI SA

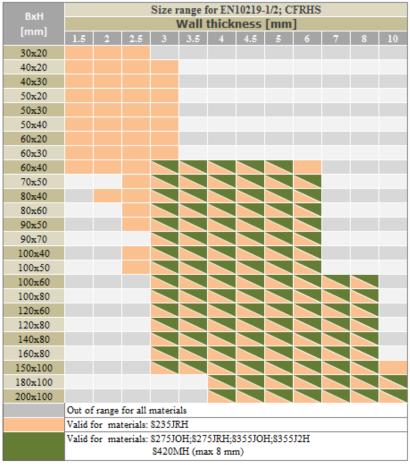
Table 1 - Cold formed HF-welded hollow sections

No	Duadwat description		Size	Standard	Steel	Comments
No.	Product description	Type	Range	Standard	grade	Comments
					S235JRH	
	Cold finished structural hollow	CFCHS	26,9÷219,1		S275JRH	Size Range
1		y and fine grain CFSHS CFRHS	20X20÷150X150	EN 10219-1/2	S275JOH	-see Tab.1.1+Tab.1.2+Tab.1.3
1	steels			$30x20 \div 200x100$	EIN 10217-1/2	S355JOH
	steers	CITAIIS	JUAZU-200X100		S355J2H	special agreement
					S420MH	





D. III		Size range for EN10219-1/2; CFSHS												
BxH					Wal	l thick	ness [mm]						
[mm]	1.5	2	2.5	3	3.5	4	4.5	5	6	7	8	10		
20x20														
25x25														
30x30														
35x35														
40x40														
50x50														
60x60														
70x70														
80x80														
90x90														
100x100														
120x120														
140x140														
150x150														
	Out of	range f	or all ma	terials										
	Valid fo	or mate	rials: S2	35JRH										
	Valid fo	or mate			S275JRI		OH;S35	5J2H						
			S4	120MH ((max 8 m	ım)								



Tab.1.2

Tab.1.3



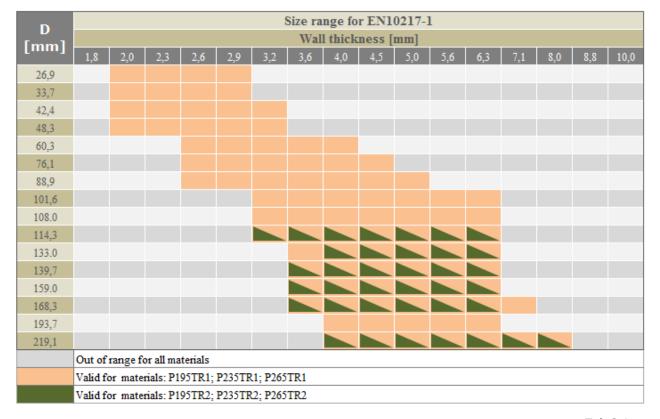
Table 1.4 - Product finishing-Cold rolled HF-welded hollow sections

Properties	Definition	Comments		
Lengths	Standard lengths: 6.0 m or 12 m	Lengths tolerances: +50/0; *Other lengths and tolerances - upon request Shorter lengths are available on request(cutting)		
Surface condition	Black	Scaled surface, temporarily protected with rolling emulsion		
Ends condition	Straight cut on line	*Upon request-machined ends for circular hollow section		
Internal weld bead	Without trimming	* Upon request - trimming the internal weld bead - depending on the steel grade and size (OD x WT)		
Leak tightness test		Not standard requirement		
NDT of the weld	Eddy current	Non standard requirement for quality grades JR and JO (non-specific inspection) *Specific inspection, upon request for : • circular hollow section≥ 33,7mm • square hollow section≥ 50x50 mm • rectangular hollow section≥60x40 mm		
Heat treatment of the weld seam	Without subsequent heat treatment	*Upon request, weld seam annealed, only for OD: 114,3mm;133mm;139,7mm;159mm;168,3mm; 219,1mm		
	Ink-Jet marking	Printed text is in white color		
Marking	Die stamping (the intervals between markers=1,5m)	Text length is limited to 40 characters.		
	Labels	Marking is applied on labels attached to the bundle		
Types of inspection document		Test report 2.2 acc. to EN10204 for non-specific inspection Inspection certificate 3.1 acc. to EN10204 for specific inspection *Upon request- inspection certificate 3.2 acc. to EN10204		
Packaging	Hexagonal/Commercial bundles Square or Rectangular bundles	About 2 Tons per bundle		



Table 2 - HFW welded steel tubes for pressure purposes

No.	Duadwat description	Size		Standard	Steel	Comments	
110.	o. Product description	Type	Range	Standard	grade	Comments	
					P195TR1		
	Welded steel tubes for pressure				P235TR1	Siza ranga saa Tah 2.1	
1	purposes Technical delivery conditions	HFW	26,9÷219,1	EN 10217-1	P265TR1	Size range-see Tab.2.1 Other dimensions can be produced by	
1	Part 1: Non-alloy steel tubes with	111, 44	20,9-219,1	EN 10217-1	P195TR2	1	
	specified room temperature properties				P235TR2	agreement	
					P265TR2		

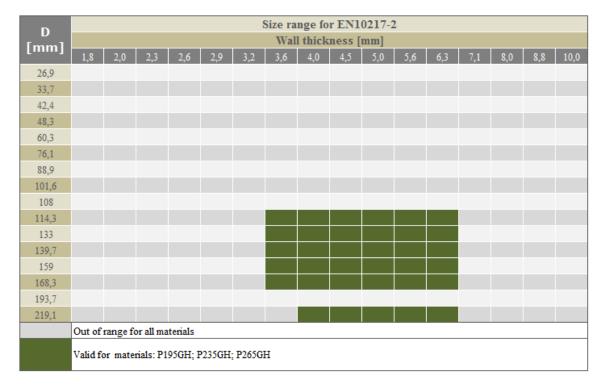


Tab.2.1



Table 3 - HFW welded steel tubes for pressure purposes

No.	Draduat description	Size		Standard	Steel	Comments
110.	Product description	Type	Range	Standard	grade	Comments
1	Welded steel tubes for pressure purposes Technical delivery conditions Part 2: Electric welded non-alloy steel tubes with specified elevated temperature proprieties	HFW	114.3÷219,1	EN 10217-2	P195GH P235GH P265GH	Size range-see Tab.3.1 Other dimensions can be produced by agreement



Tab.3.1



Table 4 - HFW welded steel tubes

No.	Product description Size Standard		Steel	Comments		
110.	Product description	Type	Range	Range		Comments
	Non allow steel tubes and fittings for				L235	Size range-see Tab.4.1
1	Non-alloy steel tubes and fittings for		$26.9 \div 219,1$	EN 10224	L275	Other dimensions can be produced by
	the conveyance of aqueous liquids				L355	agreement

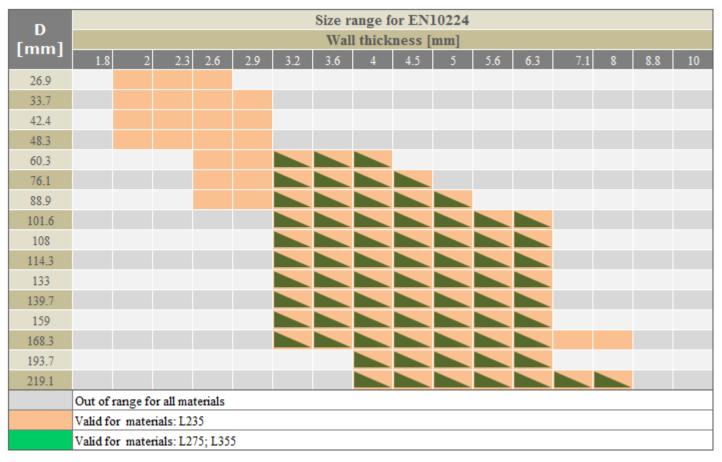




Table 5 - HFW welded steel tubes

	No.	Duodust description		Size	Standard	Steel	Comments
ا ا	NO.	Product description	Type	Range	Standard	grade	Comments
	1	Non alloy steel tubes suitable for welding and threading	3/4"-5"	26,7-139,7	EN 10255 Series H,M Types L,L1,L2	S195T	Size Range see. Tab.5.1

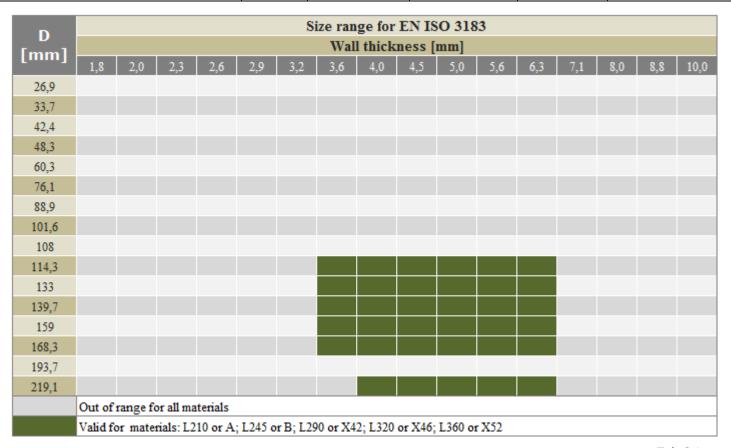
Outside Diameter	Designation of thread	Size range for EN10255							
	R	Wall thickness [mm]							
[mm]		H Heavy series	M Medium series	Type L	Type L1	Type L2*			
26.9	3/4		2.6	2.3	2.3	2.3			
33.7	1		3.2	2.9	2.9	2.6			
42.4	1 1/4		3.2	2.9	2.9	2.6			
48.3	1 1/2		3.2	2.9	2.9	2.9			
60.3	2	4.5	3.6	3.2	3.2	2.9			
76.1	2 1/2	4.5	3.6	3.2	3.2	3.2			
88.9	3	5.0	4.0	3.2	3.6	3.2			
101.6	3 1/2	-	-	3.6	-	-			
114.3	4	5.4	4.5	3.6	4.0	3.6			
139.7	5	5.4	5.0	4.5	-	-			
		Out of range for a	11 materials						
	*	Subject to roll onl	y against order						

Tab.5.1



Table 6 - HFW welded steel tubes

No.	Duaduat description		Size	Standard	Steel	Comments
110.	Product description	Type	e Range	Standard	grade	Comments
					L210/A	
	Petroleum and natural gas.				L245/B	PSL1
1	Steel pipes for pipelines for pipe line	HFW	114.3-219.1	EN ISO 3183	L290/X42	Size range-see Tab.6.1
	transportation system				L320/X46	Size range-see rab.o.r
					L360/X52	



Tab.6.1



Table 7 - Product finishing - Circular welded steel tubes

Properties	Definition	Comments		
Lengths	Standard lengths: 6.0 m or 12 m	Lengths tolerances: +50/0; *Other lengths and tolerances - upon request Shorter lengths are available on request(cutting)		
	Black	Scaled surface, temporarily protected with rolling emulsion		
Surface condition	Color-coated(pre painted) Brown Red RAL3011 Oxide Red RAL3009 Flame Red RAL3000 Signal Blue RAL5005 Moss Green RAL6005 Silver Gray RAL7001 Basalt Grey RAL7012 Grey White RAL9002	Circular tube only Size range: $48.3 \div 219.1 \text{mm}$ Length range: $4000 \div 7000 \text{mm}$ Surface preparation: Shot-blasted, Sa2÷2.5 Number of coat-layers: 1 Nominal dry film thickness: $25 \mu \text{m}$ Color type: Waterborne acrylic undercoat finishing single component paint		
Internal weld bead trimming	Maximum height of weld beadacc. to standard requirements	Available for pipes between $33.7 \text{mm} \leq \text{OD} \leq 219.1 \text{mm}$ $2.6 \text{mm} \leq \text{Wt} \leq 8.0 \text{mm}$ Restriction depending on size (OD x Wt)		
NDT of the weld seam	Eddy current	Testing class depends on the standard for tubes and type of certificate Standard Certificate Testing class EN 10217:1/2 2.2 ; 3.1 EN ISO 10893-2/E3H EN 10255 2.2 ; 3.1 EN ISO 10893-2/E4H EN 10224 2.2 ; 3.1 EN ISO 10893-2/E3H EN ISO 3183 3.1 EN ISO 10893-2/E2H		
Heat treatment of the weld seam	Available only for OD: 114,3 mm; 133 mm; 139,7 mm; 159 mm; 168,3 mm; 219,1 mm	EN ISO 3183; EN 10217-2 ; EN 10217-1 (for TR2 quality) *Upon request: EN 10217-1 (for TR1 quality); EN 10224; EN 10255		



Leak tightness test	Hydrostatic test	Available only for OD: 114,3mm;133mm;139,7mm;159mm;168,3mm; 219,1mm Testing pressure and time depends on the standard for tubes Standard Pressure[bar] Time[s] EN 10255 50 5 EN 10224 70 5 EN 10217-1; 2 70 5 Max. testing pressure 207 bar					
	Eddy current full body (alternative for hydrostatic test) Flux Leakage (alternative	for OD between 26,9mm÷88,9 mm (as per EN ISO 10893-1)					
	for hydrostatic test)	for OD between 60.3mm÷193.7mm (as per EN ISO 10893-1)					
	Straight cut on line	Square cut ends-90°					
	Beveled ends angle= 30° +5°/ -0° root face=1,6mm±0,8mm	for WT≥3,6 mm *Upon request -different angles(60°,45°) for limited sizes					
		Standard Roll Groove acc. to Victaulic / Spec. 25.01 (available for EN 10255, EN 10224, EN 10217-1) Lengths: 5,5 m to 6,4 m					
Ends condition	Grooved ends	Range of sizes for Standard Roll Grooved ends Wall thickness [mm] 2.6 2.9 3 3.2 3.6 4 4.5 5 5.6 6 6.3 33.7 42.4 4 4 5 5 5.6 6 6.3 60.3 76.1 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6					
Marking	Ink-Jet marking	Printed text is in white color; Marking depends on the standard					



Marking	Die stamping (the intervals between markers=1,5m)	Text length is limited to 40 characters. *Special agreement for more than 40 characters
	Labels	Marking is applied on labels attached to the bundle
Types of inspection document		Test report 2.2 acc. to EN10204 for non-specific inspection Inspection certificate 3.1 acc. to EN10204 for specific inspection *Upon request- inspection certificate 3.2 acc. to EN10204
Packaging	Hexagonal/Commercial bundles	About 2 Tons per bundle

Management system

Quality System	certified acc to EN ISO 9001 (with notified body TÜV SÜD)	since 1997
Environmental System	certified acc to EN ISO 14001 (with notified body TÜV SÜD)	since 2011
Health and Safety System	certified acc to OHSAS 18001 (with notified body TÜV Rheinland)	since 2011

Factory Production Control and Processes

AMTP Iasi implemented FPC for steel products for construction in compliance with Regulation 305/2011/EU of the European Parliament and the Council of March 9th,2011 for products EN 10219 and EN 10255 with the right to mark them by CE mark (with notified body TUV SUD)

Quality System Approval

AMTP Iasi is certified to fulfill the requirements of the Pressure Equipment Directive 2014/68/EU (with notified body Lloyds' Register)

Approval of Material Manufacturers

AMTP Iasi is approved by DNV-GL as a manufacturer of tubes for shipbuilding AMTP Iasi is also approved by Lloyd's Register as a manufacturer of tubes for shipbuilding

Compiled by: Ioan Hrituleac / Quality Director

Iasi, 15 September 2016