


A01 Manufacturer's works: ILVA S.p.A. <small>Company subject to management and Certification by IMA IFS S.p.A. Company subject to certification according to DL 482643 test, covered, with amendments, Rev. 02/2011, in use.</small> 		A02 Type of document: INSPECTION CERTIFICATE EN 10204 TYPE 3.1		A03 Document Nr.: 2014/00002990/01		A04 Date of issue: 05/05/2014		A05 Originator of the document: QUALITY CONTROL ILVA	
A06 Customer: USA		A07 Customer's Order nr.: M 19010494		A08 ILVA Order Item: 16918549 0100		A09 Customer Reference: 19/02/2014		A10 Supplementary Commercial Information: MATERIAL DESCRIPTION: API 5L PSL2 DSAW STEEL PIPES.	
A11 Vessel Name: YANNIS		A12 Vessel Code: 1017380/04/2014		A13 Date: 19/02/2014		A14 Date: 19/02/2014		A15 Date: 19/02/2014	


A05 Customer: USA		A06 Customer: USA	
A03 Certificate Address:		A10 Supplementary Commercial Information: MATERIAL DESCRIPTION: API 5L PSL2 DSAW STEEL PIPES.	


B01 Product: SAWL STEEL PIPES COLD EXPANDED B02 Size/Quality: API 5L 45TH EDITION:2013 B03 Supplementary Requirements: X70M PSL2/L485M PSL2 B04 Delivery Condition: THERMOMECHANICAL ROLLING		B05 Marking:  5L-0187.1		NOM. DIMENSIONS: Units: IN. B09 Thickness: 0,6250 B10 Diameter: 30,0000 B11 Length: 480,0000 B12 Theor. Mass: 7848 LBS B16 Heat nr.: 471032	
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DELIVERED MATERIAL													
B07 Pipe no	B16 Heat	B13 Mass	B15 Length	Starting Material	C04 Reference test sample		D09 Hydrotest						
					PdC	PLC	PP1	PP2	PD	PS	PW	PSI	Sec.
0032011	471032	7937	39,91	780424301	032011	032027				032004	032013	2640	10
0032013	471032	7848	39,63	780425201	032011	032027				032004	032013	2640	10
0032022	471032	8036	40,55	780423201	032011	032027				032028	032013	2640	10
0032027	471032	7837	39,67	780373201	032011	032027				032028	032013	2640	10
0032033	471032	7970	40,32	780714301	032011	032027				032028	032013	2640	10
0032034	471032	8036	40,53	780713201	032011	032027				032028	032005	2640	10
0032044	471032	8091	40,60	780714101	032011	032027				032028	032012	2640	10
0032048	471032	8069	40,58	780424201	032011	032027				032028	032012	2640	10
0032052	471032	8058	40,58	780425301	032011	032027				032028	032007	2640	10
0032054	471032	7992	40,29	780423301	032011	032027				032058	032014	2640	10
0032056	471032	8047	40,58	780374101	032011	032027				032058	032013	2640	10
0032059	471032	8014	40,53	780374201	032011	032027				032058	032013	2640	10
0032088	471032	8124	40,55	780712101	032011	032027				032058	032007	2640	10
0032097	471032	8014	40,29	780714201	032011	032027				032058	032038	2640	10
0032115	471032	8069	40,62	780712301	032011	032027				032058	032037	2640	10
0032117	471032	8025	40,34	780712201	032011	032027				032058	032013	2640	10
0032121	471032	7892	39,70	780372101	032011	032027				032058	032013	2640	10
0032124	471032	8102	40,57	780424101	032011	032027				032058	032012	2640	10
0032128	471032	8036	40,58	780372201	032011	032027				032058	032037	2640	10
0032132	471032	7881	39,52	780713101	032011	032027				032058	032012	2640	10
0032133	471032	7959	40,09	780372301	032011	032027				032199	032012	2640	10
0032136	471032	7970	40,19	780374301	032011	032027				032058	032012	2640	10
0032145	471032	8025	40,55	780373301	032011	032027				032199	032037	2640	10
0032148	471032	8069	40,62	782071101	032011	032027				032199	032013	2640	10
0032149	471032	7903	40,03	782072201	032011	032027				032199	032013	2640	10
0032151	471032	7970	40,29	782071301	032011	032027				032199	032037	2640	10
0032157	471032	7948	40,16	782071201	032011	032027				032199	032037	2640	10
0032179	471032	8047	40,60	780373101	032011	032027				032199	032037	2640	10
0032185	471032	8025	40,57	780713301	032011	032027				032199	032005	2640	10
0032187	471032	8080	40,55	780423101	032011	032027				032199	032038	2640	10
0032204	471032	8091	40,60	780425101	032011	032027				032058	032013	2640	10
0032210	471032	8036	40,55	782069201	032011	032027				032182	032005	2640	10
0032229	471032	7937	39,91	782068201	032011	032027				032182	032013	2640	10
0032237	471032	7937	40,12	782072301	032011	032027				032182	032037	2640	10
0032251	471032	8069	40,58	782069301	032011	032027				032182	032037	2640	10
0032261	471032	8047	40,63	782068301	032011	032027				032182	032013	2640	10

B08 Total pieces : 36 B14 Total mass LBS: 288191 B17 Total Length FT : 1451,98

CHEMICAL COMPOSITION AND STEEL MAKING PROCESS														
C70 Steel making process				Y (Basic Oxygen)				C94 Casting method : Continuous Casting						
C00 Sample ID	C01 test Location	C04 Code	C71 C %	C72 Si %	C73 Mn %	C74 P %	C75 S %	C76 Al %	C77 Nb %	C78 V %	C79 Mo %	C80 Ni %	C81 Cr %	C82 Cu %
032011	Ladle	PdC	0,075	0,224	1,679	0,017	0,0050	0,030	0,041	0,002	0,010	0,007	0,168	0,015
032027	Product	PLC	0,072	0,225	1,667	0,016	0,0041	0,028	0,039	0,001	0,010	0,007	0,175	0,012
			0,069	0,225	1,661	0,016	0,0041	0,027	0,038	0,001	0,009	0,007	0,179	0,011

C04 Frequency code: PdC = Heat PLC = Lot of heat PP1 = Prod. lot 1 PP2 = Prod. lot 2 PD = Per Day PS = Per Shift PW = Per Week		C10 Shape of the test piece: P = Prismatic C = Round bar * = Mill No. F = Reject R = Re-test Skt 782016		Z03 Inspection Body Stamp: Z03 QC Welding:  M. BUCCHETTI	
Z05 Management System Certification: "Q&HSE Management System certified by IGQ according to ISO 9001, ISO/TS 16949, ISO 14001 and BS OHSAS 18001" "Company with Quality Management System certified by DNV according to ISO 9001 and ISO/TS 29001"					

A01 Manufacturer's works: ILVA S.p.A. <small>Company subject to management and control by IRI IRIE S.p.A. Company subject to management according to D.L. 662/2003 and covered with amendments into Law 98/2013, on 05/05/2014</small>  TARANTO Works <small>Via Appia Est, km 648 - 74123 TARANTO ITALY</small>		A02 Type of document: INSPECTION CERTIFICATE EN 10204 TYPE 3.1		A03 Document Nr.: 2014/00002990/02		A04 Date of issue: 05/05/2014		A05 Originator of the document: QUALITY CONTROL ILVA		A06 Customer's Order nr.: M 19010496		A07 Date: 19/02/2014	
A08 ILVA Order Item: 16918549-0100		A09 Customer Reference: 1017350/04/2014		A10 Vessel Name: YANNIS		A11 Code: 1017350/04/2014		A12 Date: 1017350/04/2014					

A06.1 Customer:	A06.2 Consignor:
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A06.3 Consignee Address:	A10 Supplementary Commercial Information: MATERIAL DESCRIPTION: API 5L PSL2 DSAW STEEL PIPES.
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B01 Product: SAWL STEEL PIPES COLD EXPANDED B02 Steel Quality: API 5L 45TH EDITION:2012 X70H PSL2/L485H PSL2 B03 Supplementary Requirements: B04 Delivery Condition: THERMOMECHANICAL ROLLING	B06 Marking:  6L-0187.1	NOM. DIMENSIONS Units: IN. B09 Thickness: 0,6250 B10 Diameter: 30,0000 B11 Length: 480,0000 B12 Theor. Mass: 7848 LBS B16 Heat nr.: 471032
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C00 Sample ID	C01 Test Location	C04 Code	C03 Ti %	C04 N ppm	C05 B ppm	C06 Ca ppm	C07	C08	C09 V1	C09 V2	C91 V3	C92 V4	C93 PCH	C93 ITH
032011	Ladle	PdC	0,023		0				0,0660	0,4100			0,177	
032027	Product	PLC	0,024		1				0,0640	0,4050			0,173	
032027	Product	PLC	0,024		1				0,0630	0,4010			0,171	


Restrictions	Heat		Product	
	Min	Max	Min	Max
V1 = Nb + Ti + V		0,150		0,150
V2 = C + Mn / 5		0,460		0,460
PCN		0,250		0,250

C00 Sample ID	C01 Loc.	C04 Code	C02 Dir	C03 Temp °C	B05 Heat Treatment	C10 Shape	C24 W/Dim	C23 : L0 [xSQR(S0)]	C09 Dait	C11 YS RT0.5	C12 UTS	C13 EL. %	C14 Y/T	C15 Z %	C16 RmxA
032011	T180	PLC	T	+ 20		P	38,10	50,80mm	MPa	490	576	39,50	0,85		
032027	TW	PLC	T	+ 20		P	38,10		MPa		622				

C00 Sample ID	C01 Loc.	C45	C04 Code	C02 Dir	C40 T. Type	B05 Heat Treatment	C41 Width	C09 Unit	C03 T °C	C42 Energy K1	C42 Energy K2	C42 Energy K3	C43 Ave	C44 D1	C44 D2	C44 D3	C43 Ave	C46 Rn. S.A	
032011	T90	surface	PdC	T	KV 450		10 J	J	0	128	150	136	138	100	100	100	100	27	1
032011	NM	surface	PdC	T	KV 450		10 J	J	0	90	75	78	81					27	
032011	HAZ	surface	PdC	T	KV 450		10 J	J	0	160	153	150	154					27	

C00 Sample ID	C01 Loc.	C04 Code	C02 Dir	C53 Kind of Test	C51 Angle	C52 Male	C50 Result
032027	TW	PLC	T	Face-Root API 5L	180°	188,0	OK

D01 Visual marking and dimensional inspection: OK
D07 Method of Non Destructive weld inspection: Ultrasonic - notch N5 - hole 1,6
Z01 We hereby certify that the material complies with the terms of the order.

C04 Frequency code: PDC = Heat PLC = Lot of heat PFI = Prod. lot 1 PFI = Prod. lot 2 PD = Per. Day PS = Per. Shift PW = Per. Week	C10 Shape of the test piece: P = Prismatic C = Round bar * = Mill No. X = Reject R = Retest Skt 782016	Z03 Inspection Body Stamp: Z03 QC Validation:  M. B...
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Z05 Management System Certification:
 "Q&HSE Management System certified by IGQ according to ISO 9001, ISO/TS 16949, ISO 14001 and BS OHSAS 18001"
 "Company with Quality Management System certified by DNV according to ISO 9001 and ISO/TS 29001"