

Product	producing area	Inspection agency *												
		ABS	BV	CCS	CR	DNV	LR	NK	JPEG	CWB	CE	JIS	TÜV	RINA
E-10	Taiwan				3	3		KMW3				√		
F-03	Taiwan											√		
TC-10	Taiwan	AWS A5.1-'12 E6010												
TC-11	Taiwan	AWS A5.1-'12 E6011												
TL-50	Taiwan	3Y H10	3YHH		3Y H10	3 Y(H5)	3Ym,H10	KMW53H10			√	√		
TL-50D	Taiwan	3Y H10	3Y HH		3Y H10	3 YH10	3Ym,H10	KMW53H10				√		
TL-508	Taiwan	3Y									√			
TL-581	Taiwan	4Y H10												
TLH-581	Taiwan	4Y400 H5									√			
TN-28	Taiwan		5Y H10	0.5Ni H5		5 Y(H5) (NV 2-4L,NV 4-4L)		KMWL3H5			√			
PipeMark 816	Taiwan					4 Y46(H5)					√			
TS-308	Taiwan											√		
TS-308L	Taiwan	AWS A5.4-'12 E308L-16										√		
TS-308LB	Taiwan		308L BT											
TS-309	Taiwan											√		
TS-309L	Taiwan	AWS A5.4-'12 E309L-16										√		
TS-316	Taiwan											√		
TS-316L	Taiwan	AWS A5.4-'12 E316L-16										√		
TS-347	Taiwan											√		
TNM-9	Taiwan	AWS A5.11-'18 ENiCrMo-6 I.V@-196°C ≥47J				NV 1.5Ni up to NV 9Ni H5								
TGA-56	Taiwan	5YQ460 H5				V Y46M H5	5Y46m H5				√			
TM-56	Taiwan										√			
TM-60	Taiwan					V Y50MS(H5)					√			

Product	producing area	Inspection agency *												
		ABS	BV	CCS	CR	DNV	LR	NK	JPEG	CWB	CE	JIS	TÜV	RINA
TGA-2209	Taiwan					UNS S31803 (1.4462) I.V@-20°C ≥ 27J								
TGA-308/308L	Taiwan	AWS A5.9-22 ER308L												
TGA-309/309L	Taiwan	AWS A5.9-22 ER309L				NV 309L I.V@-46°C ≥ 27J								
TGA-316L	Taiwan	AWS A5.9-17 ER316L I.V@-196°C ≥ 60J	316L BT I.V@-196°C ≥ 27J	316LN I.V@-196°C ≥ 29J		VL 316L I.V@-196°C ≥ 27J	316Lm I.V@-196°C ≥ 29J	KY316LG(I) I.V@-196°C ≥ 27J			√			316L BT I.V@-196°C ≥ 27J
TGA-316LSi	Taiwan	AWS A5.9-22 ER316LSi												
MIG-308/308L	Taiwan	AWS A5.9-22 ER308L												
MIG-308LSi	Taiwan	AWS A5.9-22 ER308LSi		304LN I.V@-196°C ≥ 29J										
MIG-309/309L	Taiwan	AWS A5.9-22 ER309L												
MIG-309LSi	Taiwan	AWS A5.9-22 ER309LSi												
MIG-316L	Taiwan										√			
MIG-316/316L	Taiwan	AWS A5.9-22 ER316L												
MIG-316LSi	Taiwan	AWS A5.9-22 ER316LSi									√			
TSW-12KM											√	√		
TSW-12KH											√			
TSW-60G												√		
TF-565												√		
TF-585												√		
TF-218											√			
ST 55											√			

Product	producing area	Inspection agency *												
		ABS	BV	CCS	CR	DNV	LR	NK	JPEG	CWB	CE	JIS	TÜV	RINA
TSW-12KM/ TF-385	Taiwan	3YM H10												
TSW-12KM/ TF-565	Taiwan	3YM H5	3YM H5		3YM H5	III YM(H5)								
TSW-12KM/ SWX 120	Taiwan										√			
TSW-E12/ TF-650	Taiwan	4Y400TM H5												
TSW-12KH/ TF-210	Taiwan	5YQ420M H5				V Y46M(H5)		KAWL3M H5			√			
TSW-12KH/ TF-218	Taiwan					V Y46M(H5)					√			
SubCor H12KN/ TF-210	Taiwan	4YQ460M H5												
TSW-E40/ TF-210	Taiwan	5YQ460M H5				V Y46M(H5)					√			
TSW-E41/ TF-210	Taiwan	5YQ550M H5												
TSW-14HY/ TF-560	Taiwan	4YM H5		4YM H5										
TOPCORE 742B/ ST 55	Taiwan	5YQ690M H5	A5Y69M H5			V Y69MS (H5)	5Y69M (H5)							
TOPCORE 742B(2X)/ ST 55	Taiwan	5YQ690M H5	A5Y69M H5			V Y69MS (H5)	5Y69M (H5)							
TW-2209/ TFS-330	Taiwan	T.S>690MPa, Y.S>450MPa, EL>20%, I.V@-60°C ≥ 40J	2205M	2205		UNS S31803 (1.4462) I.V@-60°C ≥ 40J	S 31803							

Product	producing area	Inspection agency *												
		ABS	BV	CCS	CR	DNV	LR	NK	JPEG	CWB	CE	JIS	TÜV	RINA
TW-308/308L/ TFS-300NB	Taiwan	T.S>520MPa, Y.S>320MPa, EL>35%, I.V@-196°C ≥34J												
TW-308L/ TFS-300	Taiwan	T.S>520MPa, Y.S>320MPa, EL>35%, I.V@-196°C ≥27J												
TM-77	Taiwan						4Y42S,H5				√		√ 18827	
TM-70C	Taiwan	3YSA H10										√		
TM-80C	Taiwan											√		
TM-85C	Taiwan											√		
TM-88	Taiwan					V Y46MS(H5)								
TWE-711/C1	Taiwan	3YSA H5	SA3YM HH, A3YM HH	3YS H10	3YS H10	III YMS(H10)	3YS,H5 3YM,H5	KSW53Y40G(C)H10 KAW53Y40MG(C)H10	√		√	√	√ 18825	
TWE-711M/M21	Taiwan	3YSA H10				IV Y46MS(H5)	3YS,H10				√		√ 18826	
TWE-711Ni/C1	Taiwan	4YQ420SA H5												
TWE-715	Taiwan					III YMS(H10)					√			
FsbStar 712	Taiwan	3YSA H5												
TWE-81K2	Taiwan					V Y46MS(H5)	5Y46S,H5	KSWL3G(C)H5			√			
<b>ArcStar 81K2</b>	Taiwan					<b>V Y46MS(H5)</b>								
ArcStar 81K2M	Taiwan					V Y46MS(H5)					√			
ArcStar T12	Taiwan					IV Y46MS H5(H4)					√			
TWE-704-O	Taiwan	AWS A5.20-‘21 E70T-4												
<b>TFW-2209P</b>	<b>Taiwan</b>					<b>UNS S31803 (1.4462) I.V@-20°C ≥27J</b>								
TFW-308L	Taiwan	AWS A5.22-‘12 E308LT1-1					304L S					√		

Product	producing area	Inspection agency *												
		ABS	BV	CCS	CR	DNV	LR	NK	JPEG	CWB	CE	JIS	TÜV	RINA
TFW-308LP	Taiwan						304L				√		√ 18831	
TFW-308LTM	Taiwan										√		√ 18828	
TFW-309L	Taiwan	AWS A5.22-‘12 E309LT1-1								KW309L		√		
TFW-309L/M31	Taiwan										√			
TFW-309LMo	Taiwan	AWS A5.22-‘12 E309LMoT1-1												
TFW-309LP	Taiwan						SS/CMn				√		√ 18832	
TFW-309LTM	Taiwan										√		√ 18829	
TFW-316L	Taiwan	AWS A5.22-‘12 E316LT1-1										√		
TFW-316LP	Taiwan						316L				√		√ 18833	
TFW-316LTM	Taiwan										√		√ 18830	
TGFA-308L	Taiwan	R308LT1-5* IV@-196°C ≥ 27J												
HOBART 16	Taiwan										√			
HOBART 18	Taiwan	3Y									√			
HOBART 18-1	Taiwan	4Y H10												
HOBART 18-1 H4	Taiwan	4Y400 H5									√			
HOBART M12K	Taiwan										√			
HOBART 70S-6	Taiwan (TM-56)										√			
HOBART 70S-6	Taiwan (TGA-56)										√			
HOBART 308/308L	Taiwan	AWS A5.9-‘22 ER308L									√			

Product	producing area	Inspection agency *												
		ABS	BV	CCS	CR	DNV	LR	NK	JPEG	CWB	CE	JIS	TÜV	RINA
HOBART 309/309L	Taiwan	AWS A5.9-22 ER309L								√				
HOBART 316/316L	Taiwan	AWS A5.9-22 ER316L								√				
HOBART 308L HISIL	Taiwan	AWS A5.9-22 ER308LSi								√				
HOBART 309L HISIL	Taiwan	AWS A5.9-22 ER309LSi								√				
HOBART 316L HISIL	Taiwan	AWS A5.9-22 ER316LSi								√				
SWX 120	Taiwan										√			
SWX 150	Taiwan										√			
HOBART M12K/HA-495	Taiwan	3YM H10												
HOBART M12K/ HN-590	Taiwan	3YM H5				III YM(H5)								
HOBART M12K/ SWX 120	Taiwan										√			
HOBART H12K/ HN-521	Taiwan	5YQ420M H5				V Y46M(H5)					√			
HOBART H12K/ HN-528	Taiwan					V Y46M(H5)					√			
HOBART 40E/ HN-521	Taiwan	4YQ460M H5									√			
HOBART SDX S3Ni1Mo0.2-ENi5/ HN-521						V Y46M(H5)								

Product	producing area	Inspection agency *												
		ABS	BV	CCS	CR	DNV	LR	NK	JPEG	CWB	CE	JIS	TÜV	RINA
HOBART SubCor H12KN/ HN-521	Taiwan	4YQ460M H5												
HOBART 71T	Taiwan	3YSA H5	SA3YM HH, A3YM HH			III YMS(H10)	3YS,H5 3YM,H5				√		√ 18834	
HOBART 71TM	Taiwan	3YSA H10				IV Y46MS(H5)	3YS,H10				√		√ 18835	
HOBART 75T	Taiwan										√			
HOBART 70T	Taiwan	3YSA H10												
HOBART 77TM	Taiwan						4Y42S,H5				√		√ 18836	
HOBART 9J	Taiwan	4YQ420SA H5												
HOBART 81K2	Taiwan					V Y46MS(H5)	5Y46S,H5				√			
HOBART 81N1M	Taiwan						4Y46S,H5							
HOBART 12J	Taiwan	4Y400SA H5(H4)				IV Y46MS H5(H4)					√			
Fabshield 71K6-NP	Taiwan	4YQ460SA H5(H4)	SA4Y46M H5(H4) A4Y46M H5(H4)			IV Y46MS H5(H4)								
FabCO 308LT0	Taiwan										√		√ 18837	
FabCO 309LT0	Taiwan										√		√ 18838	
FabCO 316LT0	Taiwan										√		√ 18839	
FabCO 308LT1	Taiwan										√		√ 18840	
FabCO 309LT1	Taiwan										√		√ 18841	
FabCO 316LT1	Taiwan										√		√ 18842	

Product	producing area	Inspection agency *												
		ABS	BV	CCS	CR	DNV	LR	NK	JPEG	CWB	CE	JIS	TÜV	RINA

\*Remk:

1.Certification Unit :

AWS : American Welding Society  
 ABS : American Bureau of Shipping  
 BV : Bureau Veritas  
 CNS : Chinese National Standards  
 CR : China Corporation Register of Shipping  
 CCS : China Classification Society  
 CWB : Canadian Welding Bureau  
 CE : European Community (CE) Product

DNV: Det Norske Veritas  
 NK: Nippon KaijiKyokai  
 LR: Lloyd's Register  
 RINA: Registro Italiano Navale  
 JIS: Japanese Industrial Standards  
 KR: Korean Register of Shipping  
 DB: Deutsche Bahn AG  
 TÜV: Technischer Überwachungs Verein  
 JPEG: Petrobras Approval

2.Shielding gas : EN ISO 14175 : C1 ( 100%CO<sub>2</sub> ) , M12 ( CO<sub>2</sub> 2-5%+Ar Bal. ) , M13 ( O<sub>2</sub> 0.5-3.0%+Ar Bal. )  
 M21 ( CO<sub>2</sub> 15-25%+Ar Bal. ) , M31(50%CO<sub>2</sub>+50%Ar)

新增(1)ArcStar 81K2、TGA-309/309L、TGA-2209、TFW-2209P DNV認證

取消(1)TFW-188Mn ABS認證

(2)TFW-307L BV、LR認證