FH 5873

CLIENTE / Customer / Client

FORGINGS FLANGES&FITTINGS INC.
6875 FULTON
HOUSTON, TEXAS 77022
USA

CERTIFICADO DE INSPECCION

Works Certificate - Certificat d'Usine

DIN EN 10204 / 3.1
ISO 10474 / 3.1

FECHA: Date: 30/05/2007

N.º No. 114425

HOJA: Page: 1

N.º: SGI 1922164

ULMA FORJA, S.COOP.
Bº Zubillaga, 3 - Apdo. 14
20560 OÑATI (Gipuzkoa) SPAIN
Tel.: 34 - 943 780552
Fax: 34 - 943 781808
E-mail: ulma@ulmapiping.com

PRODUCTO / Article - Produit: FLANGES

SU PEDIDO N.º / Your Order No. / Votre Cde. N.º: 82599-033007/INDIAN.

DE / of. - de: 03/04/2007

Certified acc. PED 97/23/EC by TÜV Rheinland N.º 01 202 E/Q 02 7443

NORMAS APLICABLES / Requirements - Normes Applicables: ASME B16.5-96

MARCA DEL FABRICANTE / Mark of factory / Marque du fabricant: 59939

MATERIAL CORRESPONDIENTE / Material Correspondent - Qualité: ASTMA105N-05 / ASME SA105N-05

MODO DE FUSION (*) / Steel Making - Elaboration de l'acier: NACE MR-01-75/03

E = Elec. Y = Oxigeno básico

DEPARTAMENTO / Section / Department: QUALITY ASSURANCE

PARTIDA Item Poste	CANTIDAD Quantity Quantité	DESCRIPCION Description Description	OBSERVACIONES Remarks Observations (*)	COLADA N.º Heat No N.ºCoulée	RESISTENCIA T.Strength Resist Rupt N/mm2	LIMITE ELAST. Y.Strength Limite Elast. N/mm2	ALARGAN. Elongation Allongement Lo: 4 d %	ESTRICCION Red. Area Striction %	RESILENCIA Impact test Resilience Joules	PROBETA - 3 PROBETAS MEDIA Average Moyenne	°C	DUREZA Hardness Dureté HB
75 0A06572	105	WN 2 1500LB S/XXS RTJ A105N	NE	188A7	520	296	31,00	60,30				152
152 0A12430	72	WN 6 900LB S80 RF A105N	NE	210A7	514	315	33,00	61,70				149
153 0A12432	72	WN 6 900LB S80 RTJ A105N	NE	209A7	515	319	32,70	60,40				150
177 0A13350	24	WN 8 600LB S120 RF A105N	NE	182A7	518	320	32,60	59,00				150
178 0A13360	24	WN 8 600LB S160 RF A105N	NE	182A7	518	320	32,60	59,00				150
179 0A13362	2	WN 8 600LB S160 RTJ A105N	NE	182A7	518	320	32,60	59,00				150
180 0A13370	8	WN 8 600LB S/XXS RF A105N	NE	182A7	518	320	32,60	59,00				150
181 0A13372	7	WN 8 600LB S/XXS RTJ A105N	NE	182A7	518	320	32,60	59,00				150
191 0A14100	7	WN 10 150LB S20 RF A105N	NE	182A7	518	320	32,60	59,00				150
203 0A14342	40	WN 10 600LB S80 RTJ A105N	NE	188R6	521	332	33,50	68,00				151
276 0B132-0	36	SO 8 300LB RF A105N	NE	218A7	514	318	33,00	62,00				148
294 0B241-1	2	SO 24 150LB FF A105N	NE	77A7	520	316	32,60	63,00				151
				223A7	519	322	33,00	62,80				150

COMPOSICION QUIMICA - STEEL MARKER'S LADLE ANALYSIS - ANALYSE CHIMIQUE

COLADA N.º Heat No N.ºCoulée	C %	Si %	Mn %	P %	S %	Cr %	Ni %	Mo %	Nb %	V %	Cu %	CEQ %
182A7	0.200	0.300	0.840	0.017	0.005	0.100	0.070	0.030	0,007	0,001	0.200	0.384
188A7	0.210	0.220	0.870	0.014	0.004	0.080	0.120	0.020	0,000	0.005	0.180	0.396
188R6	0.160	0.260	1.250	0.020	0.001	0.110	0.070	0.010	0,007	0.002	0.200	0.411
209A7	0.190	0.240	0.860	0.010	0.003	0.080	0.090	0.030	0,007	0.001	0.230	0.377
210A7	0.180	0.280	0.850	0.014	0.004	0.100	0.090	0.030	0,007	0.001	0.240	0.370
218A7	0.180	0.220	0.830	0.011	0.003	0.110	0.080	0.030	0,007	0.001	0.170	0.363
223A7	0.190	0.240	0.860	0.016	0.003	0.130	0.070	0.030	0,007	0.001	0.230	0.386
77A7	0.170	0.280	1.150	0.007	0.008	0.030	0.100	0.020	0,001	0.002	0.180	0.391

- Las dimensiones y la condición superficial se hallaron satisfactorias
- Dimension and surface condition were found acceptable
- Les dimensions et etats de surface sont satisfaisants

- Los materiales citados cumplen las normas aplicables
- Manufacturing requirements are satisfied
- Les normes applicables sont respectees

EL INSPECTOR
Works Inspector - L'Inspecteur

ULMA FORJA, S. COOP.
Dpto. de Garantía de calidad
Quality Assurance Dept.

(*) OBSERVACIONES: Remarks Observations: N_NORMALIZED AT 900 C AND ALLOWED TO COOL IN STILL AIR

1/2 #1 82102/210