

CLIENTE / Customer / Client  
**TUBOS CONEX.Y TANQUES,S.A.C.V.**  
**AV. VALLE DE LAS ALAMEDAS, 66-C**  
**COL. SAN FRANCISCO CHILPAN**  
**54940 TULITLAN-EDO. DE MEXICO**

**CERTIFICADO DE INSPECCION**  
**Works Certificate - Certificat d'Usine**

DIN 50049 / 3.1.B.  
 EN 10204 / 3.1.B.

FECHA: 28/06/2004  
 Date-Date:

N.º 94779  
 No.-N.º

H.O.J.A: Page: 1

N.º: 922164



ULMA FORJA, S. COOP  
 Bº Zubillaga, 3 • Apdo. 14  
 20560 ONATI (Gipuzkoa) SPAIN  
 Tel.: 34 - 943 780552  
 Fax: 34 - 943 781808  
 E-mail: forja@forging.ulma.es

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

SU PEDIDO N.º  
 Your Order No. **7988 (02.03.04)**  
 Votre Cde. N.º

DE of - de **03/03/2004**

PRODUCTO **BRIDAS**  
 Article - Product  
 NORMAS APLICABLES **ASME B16.5-96**  
 Requirements - Normes applicables

MATERIAL CORRESPONDIENTE **ASTMA105N-02**  
 Material Correspondent - Qualité **ASME SA105N**

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

E = Elec. Y = Oxígeno básico

MARCA DEL FABRICANTE  
 Mark of factory  
 MARQUE du fabricant  
 DEPARTAMENTO  
 Section  
 Department

**GARANTÍA CALIDAD**



40474

PARTIDA Item Poste	CANTIDAD Quantity Quantité	DESCRIPCION Description Description	RESISTENCIA T. Strength Resist Rupt N/mm2	LIMITE ELAST. Yield Point Limite élastique N/mm2	ALARGAM. Elongation Allongement Lo. 4d %	ESTRICCION Reduction A Striction %	RESILIENCIA Impact energy Resilience Joules	MEDIA AVERAGE MOYENNE	PROBETA test Bar	DUREZA Hardness Dureté HB
1	100	BLIND 2 150LB RF A105N	515	308	32,70	65,00				151
6	21	BLIND 14 150LB RF A105N	506	296	31,80	63,00				150
12	216	SO 10 150LB RF A105N	515	303	31,50	63,00				151
19	280	WN 3 150LB S40 RF A105N	512	323	31,90	65,00				150
19	280	WN 3 150LB S40 RF A105N	520	324	31,80	62,70				151
19	560	WN 3 150LB S40 RF A105N	523	327	32,00	64,00				152
24	30	WN 16 150LB S/STD RF A105N	521	325	31,60	64,00				151
29	20	WN 8 150LB S80 RF A105N	515	327	32,70	65,00				149
31	9	WN 10 150LB S80 RF A105N	523	325	30,70	63,00				152

**COMPOSICION QUIMICA - STEEL MAKER'S LADLE ANALYSIS - ANALYSE CHIMIQUE**

COLADA Heat Coulee No	C %	Si %	Mn %	P %	S %	Cr %	Ni %	Mo %	Nb %	V %	Cu %	CEQ %
104A4	0.200	0.270	0.870	0.023	0.010	0.100	0.140	0.030	0.001	0.003	0.400	0.408
116A4	0.190	0.230	0.900	0.016	0.005	0.070	0.130	0.040	0.002	0.002	0.360	0.394
121A4	0.190	0.280	0.840	0.014	0.003	0.070	0.160	0.040	0.001	0.002	0.400	0.390
128A4	0.190	0.240	0.970	0.019	0.009	0.030	0.013	0.004	0.000	0.001	0.008	0.360
185A4	0.190	0.230	0.830	0.022	0.003	0.120	0.140	0.030	0.001	0.002	0.400	0.395
189A4	0.190	0.290	0.850	0.015	0.003	0.090	0.150	0.040	0.001	0.001	0.400	0.395
204A4	0.190	0.160	0.990	0.012	0.014	0.060	0.090	0.060	0.007	0.002	0.370	0.410
75A4	0.190	0.210	0.840	0.022	0.004	0.080	0.130	0.040	0.001	0.001	0.380	0.388
82A4	0.200	0.200	0.900	0.014	0.019	0.080	0.170	0.020	0.002	0.002	0.270	0.400

- Las dimensiones y la condicion 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



(\*) OBSERVACIONES: N NORMALIZADO A 900 C Y ENFRIADO EN AIRE EN CALMA

Remarks  
 Observations