

CLIENTE / Customer / Client

TUBOS CONEX Y TANQUES,S.A.C.V.
AV. VALLE DE LAS ALAMEDAS, 66-C
COL. SAN FRANCISCO CHILPAN
54940 TULLITLAN-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: 28/06/2004

No. N.º 94780
 Page: 3

N.º: 922164



ULMA FORJA, S. COOP

8º Zubillaga, 3 • Apdo. 14
 20560 ONATI (Gipuzkoa) SPAIN
 Tel.: 34 - 943 780552
 Fax: 34 - 943 781808
 E-mail: forja@forjng.ulma.es

ACCESORIOS

SU PEDIDO N.º
 Your Order No.
 Votre Cde. N.º
8110 (19.03.04)

DE
 of. - de
19/03/2004

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

MARCA DEL FABRICANTE

Mark of factory

Marque du fabricant

DEPARTAMENTO

Section

GARANTÍA CALIDAD



40475

PRODUCTO
 Article - Produit
NORMAS APLICABLES
 Requirements - Normes applicables
ASME B16.11-01

MATERIAL CORRESPONDIENTE
 Material Correspondent - Qualité
ASTMA105N-02
ASME SA105N

MODO DE FUSION (*)
 Steel making - Elaboration de l'acier
 E = Elec. Y = Oxígeno básico
NACE MR-01-75/03

| PARTIDA Item Poste | CANTIDAD Quantity Quantité | DESCRIPCION Description Description | OBSERVACIONES Remarks Observations (*) | COLADA N.º Heat No. N.º Coulee | RESISTENCIA T. Strength Resist Rupt N/mm2 | LIMITE ELAST. Yield Point Limite elastique N/mm2 | ALARGAM. Elongation Allongement Lo. d d % | ESTRICCION Reduction A Striction % | RESILIENCIA Impact energy Resilience Joules | PROBETA test bar | |
|--------------------------|----------------------------------|---|---|--------------------------------------|--|---|---|---|--|-----------------------------|-----|
| | | | | | | | | | | MEDIA AVERAGE MOYENNE | °C |
| 15 | 240 | MANGUITO 3/4 3000LB NPT A105N | NE | 135A3 | 516 | 303 | 30,60 | 61,00 | | | 150 |
| 18 | 90 | MANGUITO 1 3000LB NPT A105N | NE | 206AZ | 524 | 306 | 30,50 | 58,50 | | | 152 |
| 20 | 180 | MANGUITO 1 1/2 3000LB NPT A105N | NE | 89A4 | 515 | 312 | 33,00 | 67,10 | | | 151 |
| 22 | 200 | MANGUITO 1 3000LB SW A105N | NE | 48A3 | 512 | 304 | 30,20 | 56,30 | | | 150 |

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 % |
|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | | | | | | | | | | | |
| 135A3 | 0.190 | 0.230 | 0.930 | 0.021 | 0.023 | 0.120 | 0.240 | 0.060 | 0.002 | 0.004 | 0.350 | 0.421 |
| 206AZ | 0.220 | 0.260 | 0.810 | 0.020 | 0.030 | 0.190 | 0.180 | 0.030 | 0.001 | 0.010 | 0.120 | 0.421 |
| 48A3 | 0.180 | 0.150 | 0.830 | 0.015 | 0.018 | 0.140 | 0.120 | 0.020 | 0.002 | 0.004 | 0.280 | 0.376 |
| 89A4 | 0.190 | 0.190 | 0.930 | 0.011 | 0.005 | 0.090 | 0.090 | 0.020 | 0.010 | 0.001 | 0.200 | 0.387 |

- 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

EL INSPECTOR

Works Inspector - L'inspecteur



(*) OBSERVACIONES: N_NORMALIZADO A 900 C Y ENFRIADO EN AIRE EN CALMA
 Remarks
 Observations