

# MEGA

CLIENTE  
Customer  
Client

PROVEEDORA DE MATERIALES ANGER  
SA DE CV  
ALFONSO REYES 4030 NTE.  
COL. DEL NTE. MONTERREY, N.L.

CERTIFICATO N. 235577 FOGLIO 3  
Certificate N. Sheet  
Certificat N. Feuille

DATA / Date 13/05/03

CERTIFICATO DI COLLAUDO  
TEST CERTIFICATE  
CERTIFICAT DE CONTROLE

COMPANY  
WITH QUALITY SYSTEM  
CERTIFIED BY DNV  
ISO 9001

ORDINE  
Purchase order  
Commande

P.O. NO. 157/2002

COMMESSA 68157  
Job N  
Confirmation de commande

PROVA Test Epreuve	MATERIALE Steel quality / Matière	COLATA Heat / Coulée	C %	Si %	Mn %	S %	P %	Cr %	Ni %	Mo %	Ti %	Cu %	V %	A1	CE
CTAF	ASTM A105/01	78367	0.200	0.270	0.920	0.001	0.012	00.10	00.06	0.010	0.025	0.230	0.020	0.023	0.398
CUAD	ASTM A105/01	78981	0.195	0.200	0.890	0.002	0.006	00.05	00.05	0.000	0.017	0.120	0.020	0.021	0.368
CUAU	ASTM A105N/01	73302	0.180	0.190	0.880	0.010	0.013	00.07	00.06	0.010	0.021	0.170	0.019	0.024	0.361
CUSN	ASTM A105N/01	130233	0.174	0.216	1.072	0.001	0.007	00.14	00.19	0.021	0.000	0.286	0.001	0.025	0.417
DBAL	ASTM A105N/01	AN2939	0.190	0.220	0.860	0.003	0.022	00.16	00.15	0.050	0.000	0.240	0.000	0.008	0.401
TNAO	ASTM A105N/01	0939121	0.195	0.260	1.290	0.006	0.015	00.03	00.02	0.003	0.000	0.011	0.000	0.025	0.419

PROVA Test Epreuve	PROVETTA Test specimen / Epreuve		SNERVAMENTO N/mm <sup>2</sup> Yield point Limite d'élasticité	ROTTURA N/mm <sup>2</sup> Tensile strength Rupture	ALLUNGAMENTO % Elongation Allongement	CONTRAZIONE % Reduction of area Striction	DUREZZA HB Hardness Dureté	PIEGA Bend test Pliage	SCHIACC. Flatt. test Aplattiss.	RESILIENZA Impact test / Résilience				
	SEZIONE Section / Sect.	LUNGHEZZA Length / Longueur								UNITÀ MIS. Unit system	TIPO Type	T. °C Test tmp	VALORE / Value / Données	
CTAF	1	118.8	50.0	320.0	500.5	32.5	63.8	146-148			J	KV	0	96-90-64
CUAD	1	31.2	25.0	300.0	489.0	28.0	64.5	146-144			J	KV	0	44-64-70
CUAU	1	29.7	25.0	326.8	494.6	31.4	65.4	143-145			J	KV	0	114-106-108
CUSN	1	60.1	35.0	308.0	542.0	27.7	64.8	152-156						
DBAL	1	122.6	50.0	310.0	534.0	28.5	66.0	149-154						
TNAO	1	122.6	50.0	364.0	532.0	27.6	58.4	172-177			J	KV	0	40-42-48

PROVA Test Epreuve	NOTE / Remarks / Notes	EN10204/3.1B ** DIN 50049 3.1B.	FORMA Shape / Forme : 1 = <input checked="" type="checkbox"/> 2 = <input type="checkbox"/>
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CTAF	ELECT.FURNACE-NORMALIZED AT 900 C COOLED IN STILL AIR.	/CERT.463,02 ISMA*209889 MEGA*Nb:0.000*
CUAD	ELECT.FURNACE-NORMALIZED AT 900 C COOLED IN STILL AIR.	/CERT.477,02 ISMA*209896 MEGA*Nb:0.000*
CUAU	ELECT.FURNACE-NORMALIZED AT 900 C COOLED IN STILL AIR.	/CERT.467,02 ISMA*209889 MEGA*Nb:0.000*
CUSN	ELECT.FURNACE-NORMALIZED AT 900 C COOLED IN STILL AIR.	/CERT.131 EVASI*209881 MEGA*Nb:0,002%*
DBAL	ELECT.FURNACE-NORMALIZED AT 900 C COOLED IN STILL AIR.	/CERT.0,03 EVASI*209910 MEGA*Nb:Abs*
TNAO	ELECT.FURNACE-NORMALIZED AT 900 C COOLED IN STILL AIR.	/22769.00LUCCHINI*117937MEGA*Nb=.001%*Ca=.015%

PROVA Test Epreuve	POS. Item Pos.	QUANTITÀ Quantity Quantité	CODICE CLIENTE Customer code Code client	DESCRIZIONE / Description / Description	VISUAL AND DIMENSIONAL
CTAF	017	1226	P.O. 157/2002	TEE S. 3000 NPT A/SA105N 1.1/2	OK
CUAD	070	2000	P.O. 157/2002	90 DEG. ELBOW S. 3000 SW A/SA105N 1	OK
CUAU	063	20	P.O. 157/2002	BUSHING M/F NPT A/SA105N 4x2	OK
CUSN	048	1700	P.O. 157/2002	BUSHING M/F NPT A/SA105N 1.1/4x1	OK
DBAL	050	788	P.O. 157/2002	BUSHING M/F NPT A/SA105N 1.1/2x3/4	OK
TNAO	076	2000	P.O. 157/2002	COUPLING S. 3000 SW A/SA105N 1	OK

NOTE / Remarks / Notes

ENTE UFFICIALE DI COLLAUDO  
Inspection Authority  
Service Inspection Official

CAPO COLLAUDO  
Chief Inspection DPT  
Responsable assurance qualité

MATERIAL ACCORDING TO:  
- ASME II SA105 Ed.2001  
- NACE MR.0175 Ed.2001

DOC. CERT. M.F.C.