

FORM P/MC Rev. 0 15-05-2009

M.E.G.A.

CLIENTE
Customer
Client

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

CERTIFICATO N.
Certificat N.
Certificat N.

578062
FOLIO
Sheet
Feuille 1

DATA / Date

18/05/11

COMMESSA
Job N.
Confirmation de commande

91349

CERTIFICATO DI COLLAUDO
TEST CERTIFICATE
CERTIFICAT DE CONTROLE

COMPANY
WITH QUALITY SYSTEM
CERTIFIED BY DNV
ISO 9001

ORDINE
Purchase order 244
Commande

PROVA Test Epreuve	MATERIALE Material / Matière	COLATA Heat / Coulée	C %	SI %	Mn %	S %	P %	Cr %	Ni %	Mo %	Ti %	Cu %	V %	Al %	CE %
UFFS	ASTM A105/09	10/70761	0.180 --->	0.220 Nb% = 0.001	0.870 0.001	0.010 B % = 0.000	0.011	00.13 Sn% = 0.010	00.06 0.010	0.010	0.015	0.220	0.020	0.021	0.375
PBRB	ASTM A105/05	09/78199	0.200 --->	0.230 Nb% = 0.004	0.910 0.004	0.010 B % = 0.000	0.010	00.10 Sn% = 0.009	00.06 0.010	0.010	0.016	0.130	0.020	0.020	0.390 CE% = 0.351
PBLU	ASTM A105/05	09/78202	0.180 --->	0.220 Nb% = 0.002	0.900 0.002	0.010 B % = 0.000	0.010	00.09 Sn% = 0.008	00.05 0.010	0.010	0.018	0.150	0.017	0.033	0.366 CE% = 0.330
PNUL	ASTM A105/05	09/79119	0.195 --->	0.170 Nb% = 0.001	0.880 0.001	0.009 B % = 0.000	0.012	00.09 Sn% = 0.009	00.05 0.010	0.010	0.015	0.170	0.021	0.024	0.380 CE% = 0.3417
PHXB	ASTM A105/09	09/70110	0.185 --->	0.230 Nb% = 0.001	0.850 0.001	0.009 B % = 0.000	0.012	00.11 Sn% = 0.010	00.05 0.010	0.010	0.022	0.220	0.014	0.024	0.371 CE% = 0.3267
PWLR	ASTM A105/05	4913-09	0.200 --->	0.208 Nb% = 0.008	0.990 0.008	0.009 N % = 0.010	0.004	00.07 Sn% = 0.0093	00.16 0.050	0.050	0.000	0.154	0.001	0.024	0.411 CE% = 0.365

PROVA Test Epreuve	PROVETTA Test specimen / Eprouvette		SHEVAMENTO MPa > Yield strength Limite d'élasticité	ROTTURA MPa > Tensile strength Rupture	ALLUNGAMENTO % > Elongation Allongement	CONTRAZIONE % > Reduction of area Striction	DUREZZA HB Hardness Dureté	PIEGA Bend test Pliage	SCHIACC. Flat. test Aplattiss.	RESILIENZA Impact test / Résilience			
	SEZIONE Section / Sect.	LUNGHEZZA Length / Longueur								UNITÀ MIS. UM	TIPO Type	T. °C Test temp	VALORE / Value / Données
UFFS	31.1	25.0	309.0	494.0	34.4	68.0	143-156			J	KV	0	106-120-122
PBRB	59.7	35.0	395.7	562.1	25.4	60.9	140-142			J	KV	0	58-164-142
PBLU	119.6	50.0	371.3	523.4	30.0	77.9	148-153			J	KV	0	56-160-164
PNUL	121.9	50.0	308.5	494.6	33.6	81.2	146-149			J	KV	0	126-138-144
PHXB	30.6	25.0	307.0	529.0	32.9	69.8	137-156			J	KV	0	56-40-48
PWLR	122.6	50.0	307.0	528.0	33.1	69.8	138-164			J	KV	0	42-48-58

PROVA Test Epreuve NOTE / Remarks / Notes EN10204/3.1

FORMA Shape / Forme : 1 = Ø 2 = □

UFFS ELECT. FURNACE-NORMALIZED AT 900 C COOLED IN STILL AIR. /CERT.11337.MEGA/I*576777MEGA

PBRB ELECT. FURNACE-NORMALIZED AT 900 C COOLED IN STILL AIR. /CERT.9682.RIVA*563701MEGA*

PBLU ELECT. FURNACE-NORMALIZED AT 900 C COOLED IN STILL AIR. /CERT.9245.RIVA*563210MEGA*

PNUL ELECT. FURNACE-NORMALIZED AT 900 C COOLED IN STILL AIR. /CERT.18040.RIVA*566929MEGA*

PHXB ELECT. FURNACE-NORMALIZED AT 900 C COOLED IN STILL AIR. /CERT.294.EVASI*573646MEGA

PWLR ELECT. FURNACE-NORMALIZED AT 900 C COOLED IN STILL AIR. /CERT.10760.MEGA/I*569153MEGA

PROVA Test Epreuve	POS. Item Pos.	QUANTITÀ Quantity Quantité	CODICE CLIENTE Customer code Code client	DESCRIZIONE / Description / Description	VISUAL AND DIMENSIONAL
UFFS	020	1000		TEE S. 3000 NPT A/SA105N 1	OK
PBRB	032	3000		COUPLING S. 3000 NPT A/SA105N 1/4	OK
PBLU	034	1200		COUPLING S. 3000 NPT A/SA105N 3/4	OK
PNUL	034	2800		COUPLING S. 3000 NPT A/SA105N 3/4	OK
PHXB	056	2000		90 DEG. ELBOW S. 3000 SW A/SA105N 1	OK
PWLR	060	100		90 DEG. ELBOW S. 3000 SW A/SA105N 3	OK

NOTE / Remarks / Notes

MATERIAL ACCORDING TO NACE MR0175/2003

ENTE UFFICIALE DI COLLAUDO
Inspection Authority
Service Inspection Official

CAPO COLLAUDO
Chief Inspection DPT
Responsible assurance qualité

DOC. CERT. M.E.G.A.
Emmanuel Centemeri

M.E.G.A.

CLIENTE
Customer
Client

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

CERTIFICATO N.
Certificate N.
Certificat N. 578062

FOGLIO
Sheet
Feuille 2

DATA / Date 18/05/11

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Confirmation de commande 91349

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PROVA Test Epreuve	MATERIALE / Material / Matériau	COLATA Heat / Coulée	C %	Si %	Mn %	S %	P %	Cr %	Ni %	Mo %	Ti %	Cu %	V %	Al %	CE %
PKBF	ASTM A105/09	1941776/09	0.180 --->	0.245 Nb% = 0.0028	1.080	0.006	0.009	00.11	00.01	0.004	0.000	0.010	0.003	0.030	0.386 CEs = 0.360
PAFD	ASTM A105/05	08/76443	0.185 --->	0.210 Nb% = 0.002	0.890	0.008	0.010	00.10	00.07	0.010	0.017	0.150	0.017	0.027	0.373 CEs = 0.3333
PASF	ASTM A105/05	3664-08	0.192 --->	0.253 Nb% = 0.002	1.030	0.006	0.004	00.10	00.14	0.050	0.000	0.210	0.001	0.033	0.417 CEs = 0.3637
KXSA	ASTM A105/05	06/74521	0.205 --->	0.200 Nb% = 0.001	0.910	0.007	0.017	00.11	00.06	0.010	0.005	0.130	0.002	0.017	0.393 CEs = 0.356
PCTL	ASTM A105/05	08/74036	0.180 --->	0.230 Nb% = 0.000	0.870	0.014	0.009	00.07	00.06	0.020	0.005	0.170	0.001	0.030	0.358 CEs = 0.325
KXXA	ASTM A105/05	08/76162	0.195 --->	0.240 Nb% = 0.001	0.910	0.010	0.011	00.07	00.11	0.010	0.017	0.180	0.017	0.024	0.385 CEs = 0.346

PROVA Test Epreuve	PROVETTA Test specimen / Epreuve		SNERVAMENTO MPa ≥ Yield strength Limite d'élasticité	ROTTURA MPa ≥ Tensile strength Rupture	ALLUNGAMENTO % ≥ Elongation Allongement	CONTRAZIONE % ≥ Reduction of area Striction	DUREZZA HB Hardness Dureté	PIEGA Bend test Pliage	SCHIACC. Flat. test Aplattiss.	RESILIENZA Impact test / Resilience		
	SEZIONE Section / Sect.	LUNGHEZZA Length / Longueur								UNITÀ MIS. UM	T. °C Test temp	VALORE / Value / Données
PKBF	30.6	25.0	302.0	524.0	32.1	68.9	143-152		J	KV	0	48-36-44
PAFD	30.6	25.0	306.0	527.0	32.9	69.5	143-155		J	KV	0	52-50-48
PASF	120.8	50.0	264.9	512.1	30.6	77.3	142-146		J	KV	0	156-138-124
KXSA	30.6	25.0	358.0	557.0	26.5	59.8	170-179		J	KV	0	64-68-66
PCTL	30.6	25.0	300.0	521.0	32.3	68.9	143-149		J	KV	0	38-42-40
KXXA	122.7	50.0	376.4	535.8	28.0	77.7	155-160		J	KV	-10	96-84-80

PROVA Test Epreuve

NOTE / Remarks / Notes

EN10204/3.1

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PKBF	ELECT. FURNACE-NORMALIZED AT 900 C COOLED IN STILL AIR.	/CERT.10976.MEGA/I*572139MEGA*
PAFD	ELECT. FURNACE-NORMALIZED AT 900 C COOLED IN STILL AIR.	/CERT.10744.MEGA/I*568592MEGA*
PASF	ELECT. FURNACE-NORMALIZED AT 900 C COOLED IN STILL AIR.	/CERT.10486.MEGA/I*564290 MEGA
KXSA	ELECT. FURNACE-NORMALIZED AT 900 C COOLED IN STILL AIR.	/CERT.10226.METALMECCANICALOMBARDA*
PCTL	ELECT. FURNACE-NORMALIZED AT 900 C COOLED IN STILL AIR.	/CERT.10084FEAT*564384MEGA
KXXA	ELECT. FURNACE-NORMALIZED AT 900 C COOLED IN STILL AIR.	/CERT.37734.RIVA*554020MEGA*

PROVA Test Epreuve	POS. Item Pos.	QUANTITÀ Quantity Quantité	CODICE CLIENTE Customer code Code client	DESCRIZIONE / Description / Description	VISUAL AND DIMENSIONAL
PKBF	064	500		45 DEG. ELBOW S. 3000 SW A/SA105N 1.1/2	OK
PAFD	068	2500		TEE S. 3000 SW A/SA105N 1	OK
PASF	073	100		TEE S. 3000 SW A/SA105N 3	OK
KXSA	075	1000		UNION S. 3000 SW A/SA105N 1	nut OK
PCTL	075	2000		UNION S. 3000 SW A/SA105N 1	male+female OK
KXXA	079	2000		COUPLING S. 3000 SW A/SA105N 1/2	OK

NOTE / Remarks / Notes

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