SILCOTUB SA
Quality and Service
B.D. MIHAI VITEAZU NO.83
4700 ZALAU
ROMANIA

MILL TEST CERTIFICATE

ACCORDING TO EN 10204/3.1.B

DATE			No.	PAGE
11.02.2002	ORDER NO. PO 187030		5	1 OF 1

BUYER :	SPECIFICATION	MATERIAL	
DUFERCO SA VIA BAGUTTI 9 6900 LUGANO SWITZERLAND	ASTM A 106/1999; ASTM A 53/1999;	GRADE B	WAGGON NO. : SWAP BODY NO. : TRUCK NO. :

No.	SIZE	HEAT NUMBER	NUMBER OF PIECES	NUMBER OF PIECES	LENGTH IN METERS	WEIGHT IN MT	NUMBER OF BUNDLESS	ITEM	LOT
1	3" X 0.216 (88.90 x 5.49 mm)	32810	76	726	4425.666	49.823	38	5	
		32449	171						
		33367	118						
		33435	76						
		33434	190						
		33369	95						

DESCRIPTION

199.714MT OF SEAMLESS STEEL TUBING ORDER CONFIRMATION 187030
(DUFERCO REF.NO. 187030)

PRODUCT ANALYSES

No.	HEAT	Sample no.	CHEMICAL COMPOSITION % C	Mn	Si	P	S	Cr	Ni	Mo	Cu	V	OTHER TESTS Flattening	Bending	Flaring	Hardness	Hidrostatic PSI	NONDESTRUCTIVE TEST
1	32810	36795	0.175	0.583	0.291	0.017	0.007	0.144	0.129	0.011	0.185	0.005	GOOD	-	-	-	2500	-
	32810	36796	0.175	0.580	0.290	0.017	0.007	0.143	0.130	0.011	0.185	0.005						
2	32449	36793	0.175	0.571	0.292	0.017	0.008	0.140	0.127	0.011	0.184	0.005	GOOD	-	-	-	2500	-
	32449	36794	0.176	0.587	0.290	0.018	0.008	0.141	0.127	0.011	0.183	0.005						
	33367	36797	0.177	0.586	0.260	0.009	0.005	0.116	0.117	0.010	0.217	0.005	GOOD	-	-	-	2500	-
	33367	36798	0.176	0.591	0.260	0.009	0.005	0.116	0.116	0.010	0.217	0.005						
	33435	36801	0.184	0.561	0.270	0.011	0.007	0.161	0.164	0.012	0.204	0.005	GOOD	-	-	-	2500	-
	33435	36802	0.186	0.561	0.271	0.011	0.007	0.161	0.164	0.012	0.208	0.005						
	33434	36803	0.170	0.560	0.271	0.011	0.008	0.161	0.164	0.012	0.205	0.005	GOOD	-	-	-	2500	-
	33434	36804	0.170	0.564	0.271	0.011	0.008	0.161	0.164	0.011	0.203	0.005						
	33369	36805	0.172	0.564	0.273	0.010	0.005	0.112	0.117	0.010	0.219	0.005	GOOD	-	-	-	2500	-
	33369	36806	0.171	0.581	0.274	0.010	0.005	0.113	0.117	0.010	0.221	0.005						

MECHANICAL PROPERTIES

TEST SPECIMEN No.	HEAT	Sample no.	Dimensions inch x inch	Section inch²	Length inch	TENSION Tensile Strenght Required Min.	Max.	Result PSI	TRACTION Yield Strenght Required Min.	Max.	Result PSI	Elongation Required Min.	Result %	CHARPY V-NOTCH 1	2	3	Average	TEMP. °F	SHEAR %
1	32810	36795	0.76 x 0.22	0.17	2.00	60000		74415	35000		52010	22.00	32.10						
2	32449	36793	0.77 x 0.22	0.17	2.00	60000		70887	35000		49883	22.00	31.10						
	33367	36797	0.77 x 0.22	0.17	2.00	60000		73194	35000		50571	22.00	34.30						
	33435	36801	0.78 x 0.22	0.17	2.00	60000		74204	35000		48766	22.00	31.60						
	33434	36803	0.78 x 0.22	0.17	2.00	60000		72603	35000		46841	22.00	35.20						
	33369	36805	0.75 x 0.21	0.16	2.00	60000		75581	35000		49183	22.00	33.30						

I CERTIFY THAT THE MATERIAL HEREIN DESCRIBED HAS BEEN MANUFACTURED WITH THE ORDERED SPECIFICATION AND THAT THE TEST INFORMATION IS CORRECT AND CONTAINED IN THE RECORDS OF THE COMPANY

SIGNATURE

QUALITY DEPT. CHIEF
Ing. TIBERIU ERDEI

S.C. SILCOTUB S.A. CONTROL TEHNIC Zalau - Romania