

ECSC - CECA - EGKS
EUROPEAN COAL AND STEEL COMMUNITY
COMMUNAUTÉ EUROPÉENNE DU CHARBON ET DE L'ACIER
EUROPÄISCHE GEMEINSCHAFT FÜR KOHLE UND STAHL
EURO - STANDARD No. 085-I UNALLOYED STEEL

CERTIFICATE OF ANALYSES

Laboratory Means (4 values)

Line No.	%C	%Si	%Mn	%P	%S	%Co	%Cu	%Pb	%Sb	%V	%Zn
1	0.0630	—	0.9475	—	0.3162	—	0.2772	0.0009	0.0066	0.0010	0.0018
2	0.0640	—	0.9550	0.0605	0.3268	0.0155	0.2800	0.0009	0.0066	0.0014	0.0020
3	0.0648	0.0068	0.9557	0.0611	0.3288	0.0170	0.2825	0.0009	0.0068	0.0017	0.0020
4	0.0650	0.0070	0.9575	0.0615	0.3295	0.0170	0.2845	0.0010	0.0068	0.0018	0.0021
5	0.0650	0.0070	0.9675	0.0615	0.3300	0.0182	0.2850	0.0010	0.0069	0.0018	0.0022
6	0.0652	0.0071	0.9688	0.0618	0.3311	0.0182	0.2865	0.0010	0.0072	0.0020	0.0022
7	0.0664	0.0072	0.9740	0.0618	0.3338	0.0182	0.2858	0.0010	0.0072	0.0020	0.0023
8	0.0665	0.0074	0.9750	0.0618	0.3345	0.0184	0.2866	0.0010	0.0073	0.0020	0.0024
9	0.0665	0.0080	0.9765	0.0620	0.3362	0.0185	0.2900	0.0010	0.0075	0.0021	0.0024
10	0.0667	0.0082	0.9775	0.0620	0.3372	0.0185	0.2900	0.0010	0.0075	0.0022	0.0024
11	0.0672	0.0083	0.9798	0.0620	0.3375	0.0190	0.2900	0.0011	0.0075	0.0022	0.0026
12	0.0675	0.0085	0.9800	0.0622	0.3375	0.0190	0.2902	0.0011	0.0075	0.0024	0.0027
13	0.0678	0.0086	0.9800	0.0622	0.3388	0.0190	0.2910	0.0012	0.0079	0.0035	0.0030
14	0.0678	0.0088	0.9802	0.0628	0.3398	0.0190	0.2932	0.0012	0.0080	0.0035	0.0032
15	0.0685	0.0088	0.9850	0.0633	0.3400	0.0198	0.2952	0.0013	0.0080	—	0.0042
16	0.0688	0.0090	0.9900	0.0638	0.3408	0.0198	0.2961	—	—	—	—
17	0.0690	0.0090	0.9948	0.0641	0.3418	0.0208	0.2982	—	—	—	—
18	0.0702	0.0095	0.9950	0.0675	0.3420	0.0215	0.3025	—	—	—	—
19	0.0730	—	0.9965	—	0.3562	—	0.3030	—	—	—	—
20	—	—	0.9990	—	—	—	0.3062	—	—	—	—
M _M	0.0670	0.0081	0.9768	0.0625	0.3357	0.0187	0.2908	0.0010	0.0073	0.0021	0.0025
S _M	0.0023	0.0009	0.0147	0.0016	0.0081	0.0014	0.0077	0.0001	0.0005	0.0007	0.0006

M_M: Mean of the intralaboratory means.

S_M: Standard deviation of the intralaboratory means.

CERTIFIED VALUES

	%C	%Si	%Mn	%P	%S	%Co	%Cu	%Pb	%Sb	%V	%Zn
M _M	0.067	0.008	0.977	0.062	0.336	0.019	0.291	0.0010	0.0073	0.0021	0.0025
S _M	0.002	0.001	0.015	0.002	0.008	0.001	0.008	0.0001	0.0005	0.0007	0.0006

Laboratories which have participated in the standardization of Euro-Standard 085-I

Acciaierie di Piombino, Piombino (Italy)	Dillinger Hüttenwerke, Dillingen-Saar (Germany)
Aciéries Neuves Maisons, Neuves Maisons (France)	Dunford Hadfields Ltd., Sheffield (U.K.)
Arbed, Division de Differdange, Differdange (Luxembourg)	G.K.N. Group Technological Centre, Wolverhampton (U.K.)
Arbed, Division d'Esch Belval, Esch-sur-Alzette (Luxembourg)	Hainaut Sambre, Couillet (Belgium)
British Steel Corporation, Bilston, Wolverhampton and Birchley Works (U.K.)	Hoogovens-ESTEL, IJmuiden (Holland)
British Steel Corporation, Rotherham Works (U.K.)	Institut de Recherches de la Sidérurgie Française (IRSID), St. Germain en Laye (France)
Boudet et Dussaix, Croissy sur Seine (France)	Mannesmann A. G. Hüttenwerke, Duisburg (Germany)
Bundesanstalt für Materialprüfung (BAM), Berlin (Germany)	Neunkircher Eisenwerke, Neunkirchen (Germany)
Centro Sperimentale Metallurgico, Rome (Italy)	NV Staalgieterwerk-SMDK, Utrecht (Holland)
Cockerill, Seraing (Belgium)	Ridsdale & Co. Ltd., Middlesbrough (U.K.)
Creusot-Loire, Le Creusot (France)	

For the Commission of Co-ordination of the Nomenclature of metallurgical products—Commission of European Communities.

For information regarding the Euro-Standards, please refer to the ECSC Information Circular No. 1 available from the Institution responsible for standardisation in your country.

Pour tous renseignements sur les Euro-échantillons-types, se reporter à la Circulaire d'Information No. 1 de la CECA, diffusée par les organismes nationaux de normalisation.

Wegen Erläuterungen über Euro-Analysenkontrollproben siehe Mitteilung Nr 1. EGKS. Zu beziehen durch die nationalen Normenorganisationen.



BUREAU OF ANALYSED SAMPLES LIMITED

Newham Hall, Middlesbrough, England. JULY, 1977

METHODS USED

085-1

Element	Line Number	Methods
C	1	Low Pressure gasometric
	2-5-7-12	Coulometric
	3-17-18-19	Infrared absorption
	4-15	Non aqueous titration
	6-8-9-16	Thermal conductivity
	10-11-13-14	Conductimetric
Si	4-5-6-7-10-11-12-13-15-16-17-18	Colorimetric as molybdenum blue
	3-9	Atomic absorption spectroscopy
	8-14	Gravimetric after dehydration with perchloric acid
Mn	1-2-6-10-12-15-18	Atomic absorption spectroscopy
	3-5-7-8-9-13-14-16-17-19-20	Colorimetric with periodate
	4-11	Titrimetric after oxidation with persulphate/silver nitrate
P	2-6-7-10-15-16	Colorimetric as phosphovanadomolybdate with extraction
	3-4-5-8-11-13-14-17-18	Colorimetric as molybdenum blue
	9-12	Titrimetric, separation as phosphomolybdate
S	1-13-14	Combustion, oxidation/reduction titration
	2-16-17	Combustion, acidimetric titration
	3-10	Gravimetric as barium sulphate
	4	Combustion, thermal conductivity
	5-6-9-11-12-18-19	Combustion, infrared absorption
	7	Combustion, coulometric
8-15	Combustion, conductimetric	
Co	2-4-7-14	Colorimetric with nitroso-R-salt
	3-5-6-9-10-13-15-16-17-18	Atomic absorption spectroscopy
	8	Colorimetric with 2-nitroso 1-naphthol after extraction of iron
	11-12	Colorimetric with nitroso-R-salt after separation with 1-nitroso 2-naphthol
Cu	1-2-4-5-6-8-9-10-11-14-17-20	Atomic absorption spectroscopy
	3-7-15-18-19	Colorimetric with 2,2'-diquinoly
	12	Colorimetric with diethyldithiocarbamate
	13-16	Colorimetric with bis-cyclohexanone oxalyldihydrazone
Pb	1-2-4-5-6-7-8-9-10-11-12-13-14-15	Atomic absorption spectroscopy
	3	Colorimetric with dithizone
Sb	1-4-9-10-13-14	Atomic absorption spectroscopy
	2-8	Colorimetric with brilliant green
	3-12-15	Colorimetric as iodide
	5-6-7-11	Colorimetric with rhodamine B
V	1-6-9-10	Atomic absorption spectroscopy
	2	Colorimetric with dimethyl naphthidine
	3	Titrimetric with ferrous ammonium sulphate
	4-5-13-14	Colorimetric as phosphovanadotungstate after separation of iron
	7-11-12	Colorimetric with N-benzoyl phenylhydroxylamine
Zn	1-2-3-4-6-7-8-9-10-11-12-13-14-15	Atomic absorption spectroscopy
	5	Colorimetric with dithizone