INSTITUTE OF NON-FERROUS METALS

Analytical Chemistry Department
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CERTIFICATE OF ANALYSIS

Zinc

The average results of chemical analysis in wt %

No / Element	ZH1	ZH2	ZH3	ZH4	ZH5	ZH6
Mn	1,39	0,95	0,49	0,049	0,0047	-
Ni	0,0064	0,050	-	0,93	1,37	-
Pb	0,0072	0,051	0,31	0,63	0,91	-
Fe	0,0038	0,00042	-	-	-	0,053
Cd	0,00079	0,0060	0,018	0,030	-	-
Cu	0,063	0,15	0,30	0,41	-	-
Mg	0,0014	0,0094	0,049	-	0,097	-
Al	1,05	0,74	-	0,037	0,0050	0,45
Sn	0,0072	0,050	0,11	0,14	-	-
Sb	0,0012	0,011	0,030	0,048	-	
Zn	the rest	the rest	the rest	the rest	the rest	the rest

Director of the Institute

Prof. Ph.D. Zbigniew Śmieszek

The uncertainty in wt % at the probability level of 0,05

No / Element	ZH1	ZH2	ZH3	ZH4	ZH5	ZH6
Mn	0,0088	0,0035	0,0088	0,00088	0,00012	
Ni	0,00022	0,0020		0,020	0,015	
Pb	0,000068	0,0020	0,020	0,027	0,026	
Fe	0,00015	0,000097				0,0026
Cd	0,000015	0,000096	0,0012	0,0012		
Cu	0,0025	0,0088	0,0088	0,015		
Mg	0,00012	0,00031	0,0020		0,0020	
Al.	0,015	0,0088		0,00088	-	0,0088
Sn	0,00019	0,0026	0,0088	0,015		
Sb	0,000068	0,0020	0,0012	0,0022		

Analytical methods applied:

Mn - ICP, AAS
Ni - ICP, AAS
Pb - ICP, AAS,
Fe - ICP, AAS
Cd - ICP, AAS
Cu - ICP, AAS
Mg - ICP, AAS
Al - ICP, AAS
Sn - ICP, AAS
Sb - ICP, AAS

The chemical analyses have been carried out in three laboratories including laboratory of the Institute of Non-Ferrous Metals.

Zn-Al alloys CRMs were made by melting all components in the coreless induction furnace and by casting into special cast iron moulds.

Final product of CRMs has been obtained in form of discs 44 mm in diameter and 26 mm in height.