



# INSTITUTE OF NON-FERROUS METALS

Analytical Chemistry Department

44-101 Gliwice, ul. Sowińskiego 5

CERTIFICATE OF ANALYSIS

Zn-Al alloy

*The average results of chemical analysis in wt %*

Element <sup>No</sup>	ZG1	ZG2	ZG3	ZG4
Al	3,07	3,56	4,00	4,64
Cu	1,34	0,72	0,11	(0,0089)
Mg	0,074	0,048	0,028	0,00055
Pb	0,0090	0,0065	0,0033	0,0013
Cd	0,00048	0,0049	0,0028	0,011
Sn	0,0068	0,0048	0,00067	0,0021
Fe	0,0083	-	0,011	0,016
Ni	0,0067	0,0025	0,0010	0,00042
Si	(0,036)	(0,024)	(0,010)	(0,0047)
Zn	the rest	the rest	the rest	the rest

Director of the Institute

Prof. Ph.D. Zbigniew Śmieszek

*The confidence intervals in wt % at the probability level of 0,05*

Element <sup>No</sup>	ZG1	ZG2	ZG3	ZG4
Al	0,020	0,022	0,081	0,014
Cu	0,012	0,020	0,022	-
Mg	0,00028	0,0012	0,0032	0,00043
Pb	0,00018	0,00018	0,00015	0,00020
Cd	0,000041	0,00012	0,000088	0,0013
Sn	0,00037	0,00038	0,000049	0,00020
Fe	0,00020	-	0,0012	0,00088
Ni	0,00033	0,00028	0,000052	0,000039
Si	-	-	-	-

*Analytical methods applied:*

*Al - ICP AES, AAS*  
*Cu - ICP AES, AAS*  
*Pb - ICP AES, AAS*  
*Cd - ICP AES, AAS*  
*Sn - ICP AES, spectrophotometric*  
*Fe - ICP AES, AAS*  
*Ni - ICP AES, spectrophotometric*  
*Si - spectrophotometric*

*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.*