


INTERPLANT STANDARD - STEEL INDUSTRY		
 IPSS	SPECIFICATION FOR ELECTRONIC MEGNETIC FLOW METER	IPSS: 2-07-078-13 (First Revision)
	CORRESPONDING IS DOES NOT EXIST	<i>Formerly-: IPSS: 2-07-078-97</i>

0. FOREWORD

- 0.1 Interplant standardization activity in steel industry is being pursued under the aegis of Steel Authority of India Ltd (SAIL). This Interplant Standard (first revision) was prepared by the Standards Committee on Computerization and Automation, IPSS 2:7 with the active participation of the representatives of steel plants, established manufacturers in this field & reputed consulting organizations. Originally, the standard was published in 1997. Based on recent developments and technological up-gradation, it is revised and adopted in February, 2013
- 0.2 Interplant Standards on design parameters primarily aim at achieving rationalization and unification of parts and assemblies of process and auxiliary equipment used in steel plants and these are intended to provide guidance to the steel plant engineers, consultants and manufacturers in their design activities.

1. SCOPE

- 1.1 This Interplant Standard covers the specification for electro magnetic flow meter.

2. SPECIFICATION

- 2.1 Detector – Detector shall be as follows:

Type	:	Electro magnetic
Type of liquid	:	i) other than fluid containing magnetic substances ii) Conductivity of fluid > 5 ys/cm
Liquid pressure	:	-1 kg/ cm ² to + 40 kg/cm ²
Liquid temperature	:	0°C +180°C
Accuracy	:	± 0.5% of full scale or better
Mounting		Directly in pipeline with option of remote electronics mountings

Process connection :	Flanged or water type (as required)
Pipe Size :	NB – upto 500 mm
Enclosure :	IP 65 or better
Maximum velocity :	10 m/s (max)

2.2 Material – Materials shall be as follows :

Metering tube :	SS 304 / SS 316
Flanges :	Carbon steel / SS 304
Earthing ring :	Stainless steel SS 304/316
Lining	PVDF / adhesive Teflon / Moulded Teflon / Neoprene rubber / polyurethane rubber / PFA / PTFE depending upon the process media temperature.
Electrodes	Hastelloy-c/All variant of SS 316
Enclosure	Die cast Aluminum

2.3 Transmitter / Signal Converter :

Output signal	4-20mA dc with HART/ Profibus PA/ Foundation Field Bus
Indication	Digital display of all I/O parameters and diagnostics features
Power supply	110V A.C \pm 10%./ 24V dc/ 240 V ac \pm 10%, 50 Hz \pm 5%
Surge protection	Mandatory
Enclosure protection	(IP65 or better)
Ambient temp.	-10 to 55°C
Humidity	95% RH
Mounting	Pipe or panel mounting Pipe / Panel / channel mounting
Flow rate setting	upto 10 m/s (adjustable)
Empty pipe	Down scale drive and alarm output in event of empty pipe
Special feature	All input parameters should be stored without battery

3.0 Provision of Inbuilt Calibration facility

Coil Fault Diagnostics should be included

Standard Calibration Certificate with electrical signal output values (from recognized flow laboratory) should be provided separately for each equipment.
