



PHARMA DEVILS

ENGINEERING DEPARTMENT

STANDARD OPERATING PROCEDURE

Department: Engineering	SOP No.:
Title: Calibration of Magnehelic Gauge	Effective Date:
Supersedes: Nil	Review Date:
Issue Date:	Page No.:

1.0 OBJECTIVE:

To lay down the procedure for Calibration of Magnehelic Gauge.

2.0 SCOPE:

This standard operating procedure (SOP) is applicable for Calibration of Magnehelic Gauge.

3.0 RESPONSIBILITY.

Executive Engineering will perform the Calibration and prepare the data sheet.

Manager Engineering will check the data sheet and calibration certificate.

Manager QA will verify & approved the data and calibration certificate

4.0 PROCEDURE:

4.1 Instruments Used

4.1.1 Master Digital Manometer.

4.2 Procedure For Calibration:

4.2.1 Refer SOP No:..... for calibration due date of field instruments.

4.2.2 Informs to concern department supervisor for the calibration of Magnehelic gauge.

4.2.3 Remove the Magnehelic gauge for under calibration.

4.2.4 Note down following data in calibration certificate.

Nomenclature.

Location.

ID.

Range.

Least Count.

Ambient Temperature (°C).

RH.

4.2.5 Disconnect the high-pressure connection and Low-pressure connection open to the atmosphere & ensure the zero readings of Magnehelic gauge.

4.2.6 Connect the master digital manometer and under calibration Magnehelic gauge to the pressure source.

4.2.7 Apply gradually pressure from the pressure source to the master digital manometer with under calibration Magnehelic gauge and note down readings of master digital manometer and under calibration Magnehelic gauge in the calibration certificate.

4.2.8 Note down five readings of full scale of under calibration Magnehelic gauge and deviation in calibration certificate.

4.2.9 Calculate the % accuracy at full-scale deflection of Unit under calibration by using formula.

S

% Accuracy at FSD = -----X 100



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F.S.

S = Deviation from standard.

F.S = Full scale deflection.

4.2.10 Note down % accuracy of F.S.D. in calibration certificate.

4.2.11 Fill up the calibrated tag and attached with the Magnehelic gauge.

4.3 Acceptance criteria

4.3.1 Magnehelic Gauge = 3 % OF F.S.D.

5.0 SAFETY AND PRECAUTIONS:

Not Applicable

6.0 REVISION HISTORY:

Revision No.	Reason for Revision	Superseded from & date
00	New	-----

7.0 REFERENCES:

IS 1248 – 1963 for Magnehelic Gauge.

Manual of Digital Manometer.

8.0 ABBREVIATIONS:

SOP : Standard Operating Procedure.

IS : Indian standard.

FSD : Full Scale Deflection.

RH : Relative Humidity

ID : Identification Number

No : Number

QA : Quality Assurance

9.0 ANNEXURE

Annexure I: Calibration certificate.



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ANNEXURE I CALIBRATION CERTIFICATE

Certificate No.	Calibration On:
Tested at	Next Due On:

ITEM DETAILS

Nomenclature: Magnehelic Gauge.	Location:
ID. :	Ambient Temperature:
Range:	RH.
Least Count:	

STANDARDS USED FOR CALIBRATION

S.No	Nomenclature	Certificate No	Trace ability to	Validity
1.	Digital Manometer.			

OBSERVED READINGS

S.No.	Master Digital Manometer Readings in mmWc	Magnehelic Gauge Under Calibration Readings mmWc	Deviation In % of F.S.D

Reference used: IS 1248 – 1963 for Magnehelic gauge

Remarks:

1. Maximum error of this instrument is within / outside specified limit.
2. All measurement standards used for calibration are traceable to National Standards with unbroken chain.

Calibrated By:

Certified By: