



# DEEP METALLURGICAL SERVICES

Approved Proficiency Testing Provider (Chemical & Mechanical) by NABL



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ISO 17043 - 10, PC - 1045

## TECHNICAL STANDARD INSTRUCTION FOR CHEMICAL ANALYSIS OF A LOW ALLOY STEEL BY OPTICAL EMISSION SPECTROSCOPY (OES)

### A Proficiency Testing Program

- A.1 Program Name: Chemical Composition of low alloy steel by OES
- A.2 Program Code No.: Chem. 3
- A.3 Material: AISI 8620 Steel
- A.4 Condition: Normalized
- A.5 Test Method: ASTM E415-2017, IS8811, ISO or any validated method
- A.6 Program starting dates
- A.7 Program closing date
- A.8 Last date of result submission
- A.9 Final result reporting date

### B Sample Description

- B.1 Test Specimen:** One cylindrical specimen drawn from a machined steel bar with surface finish of about 80grit is provided. The nominal dimension of the specimen is 30Φ mm and thickness 12 mm. The steel has been normalized. The specimen bears a unique Identification number that has to be mentioned in the test result reporting format sheet accordingly.

### C Test Requirement:

- C.1** Calibrated Optical Emission Spectrometer (OES) should be used for analysis.
- C.2** Three decimal accuracy of result for all elements must be provided as per reporting format

### D Test procedure: The following parameters have to be reported in the test result format.

- D.1** Test Method & Equipment details.
- D.2** Certified or standard reference material used & traceability of used SRM/CRM

### E Expected range:

PT program	Test method	Expected range	Element of analysis
Chem. 3	ASTM E415/IS8811 or any validated method	Total alloying elements less than 5%	C, Mn, P, S, Si, Ni, Cr, Mo

### Competency

- F.1 Competent person should carry out the test and evaluate the result as routine test
- F.2 The participant is required to report result with three decimals accuracy
- F.3 PT results will be analyzed based on Robust Algorithm A and Z score according to ISO13528-15.
- F.4 Final report includes all clauses of 4.8.2 of ISO17043-2010
- F.5 In case of loss or deterioration of PTP Specimen, please feel free to contact PT provider
- F.6 In case of exclusion of a PT schemes, the participant must return sample
- F.7 Collusion and falsification of your PTP result are totally forbidden. In case of suspicion of collusion or falsification, the PT Provider reserves the right to exclude the participants.

### PT Coordinator,

K.K. Karmakar  
Deep Metallurgical Services, Email: deep.ptp2018@gmail.com



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## TECHNICAL STANDARD INSTRUCTION FOR CHEMICAL ANALYSIS OF A LOW ALLOY STEEL BY OPTICAL EMISSION SPECTROSCOPY (OES), ASTM E415 -2017

### TEST RESULT REPORT FORMAT

#### A Proficiency Testing Program

- A.1 Program Name: Chemical Composition of low alloy steel by spark OES  
 A.2 Program Code No.: Chem. 3  
 A.3 Material: AISI 8620 Steel, Normalized  
 A.4 Test Method: ASTM E415-2017, IS8811, ISO or any validated method  
 A.5 Program starting date  
 A.6 Program closing date  
 A.7 Last date of result submission  
 A.8 Final result reporting date

Sr. No.	Element	Result in %(Up to 3 decimal)	Method
1	Carbon (C)		
2	Chromium (Cr)		
3	Manganese (Mn)		
4	Molybdenum (Mo)		
5	Nickel (Ni)		
6	Phosphorus (P)		
7	Silicon (Si)		
8	Sulphur (S)		

Equipment details:

NABL/ISO Certificate No.:

Tested by organization

Name:

Designation

Please send the complete Test Result Form (Soft & hard copy) to PTP Coordinator, Deep Metallurgical Services, 20, New Modella Industrial Estate, Padwal Nagar, Wagle Estate, Thane, Maharashtra, India, Pin-400604, Mobile- 9892216539, Email: mech@deep-ntp.in, deep.ptp2018@gmail.com