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Guidance on Practice for Amine Services

GP 36-12

BP GROUP
ENGINEERING TECHNICAL PRACTICES

Foreword

This is the first issue of Engineering Technical Practice (ETP) BP GP 36-12. This Guidance on Practice (GP) is based on parts of heritage documents from the merged BP companies as follows:

Amoco

A MM-GEN-00-G	Metallic Materials—General—Guide.
A MM-GEN-00-E	Metallic Materials—General—Selection Specification.

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RP 13-1-14	Amine Plants Dec 1997.
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1. Scope

- a. This GP addresses general guidelines for the selection of materials of construction in Upstream and Downstream services containing amine solutions.
- b. Contractors, fabricators, and suppliers, as well as all those involved directly or indirectly in materials selection are encouraged to suggest alternative options that will benefit the application.

2. Normative references

The following normative documents contain requirements that, through reference in this text, constitute requirements of this technical practice. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this technical practice are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies.

American Society for Testing and Materials (ASTM)

ASTM B92 Test Method for Vickers Hardness of Metallic Materials.

American Petroleum Institute (API)

API RP 945 Avoiding Environmental Cracking in Amine Units.

International Organisation for Standardisation (ISO)

ISO 15156 Petroleum and natural gas industries – Materials for use in H₂S-containing environments in oil and gas production (same as NACE MR0175).

NACE International (NACE)

NACE MR0175 Sulfide Stress Cracking Resistant Metallic Materials for Oil Field Equipment (same as ISO 15156).

NACE MR0103 Materials Resistant to Sulfide Stress Cracking in Corrosive Petroleum Refining Environments.

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GP 06-20 Guidance on Practice for Materials for Sour Service.

GP 36-10 Guidance on Practice for Metallic Materials Selection.

GIS 36-102 Guidance on Industry Standard for Hardness Testing, Post Weld Heat Treatment, Stress Relief, and Pickling for Pressure Vessels, Piping, and Other Components.

GIS 36-107 Guidance on Industry Standard for Integral Cladding, Weld Overlay, and Limited Loose Lining of Pressure Vessels and Components.

3. Terms and references

Acid gases

Contaminants, primarily H₂S and CO₂ that are to be scrubbed from the feed process stream to an amine unit.

