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Guidance on Practice for Internal Coatings

GP 06-63

BP GROUP
ENGINEERING TECHNICAL PRACTICES

Foreword

This is the first issue of Engineering Technical Practice (ETP) BP GP 06-63. This Guidance on Practice (GP) is based on parts of heritage documents from the merged BP companies as follows:

British Petroleum

GS 106-1 Cement-Mortar Lined Steel Pipe & Fittings.

Amoco

A CP-COAT-INT-C Corrosion Protection—Coatings—Internal Tanks & Vessels—
Application Specification.

ARCO

ES 500-89 Painting and Protective Coatings.

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1. Scope

This Engineering Technical Practice (ETP) provides guidance on practice for internal coatings.

The Guidance on Practice (GP) is based on current good practices and experiences across the globe.

2. Normative references

The following normative documents contain requirements that, through reference in the 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.

BP

GIS 06-601	Guidance on Industry Standard for Coating of Metal Surfaces and Equipment.
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3. Symbols and abbreviations

For the purpose of this GP, the following symbols and abbreviations apply:

C-steel	Carbon steel
CAPEX	Capital expense
CRA	Corrosion resistant alloy
H&S	Health and safety
OPEX	Operating expense

4. Background

The choice of carbon-steel for the exploitation of oil and gas fields is limited where highly corrosive products are present.

Produced well fluids are expensive to treat at the well-head due to space restrictions on offshore platforms and due to the trend towards unmanned platforms and subsea completions.

With ever increasing demand for higher production levels from marginal fields and the trend towards higher operating temperatures and pressures, there is also increasing corrosion risks on separation systems, e.g. gas/ oil/ water separators, coalescers, slug catchers, etc. Similar limitations, therefore, apply to the use of carbon-steel for the manufacture of vessels for the treatment of well fluids before onshore processing.

Storage of stabilized hydrocarbon products (oil and condensates), although not as demanding on C-steel as the operating conditions to which tubing, line pipe, and vessel are exposed, is still a major corrosion issue and one that often needs to be addressed through the use of internal coatings.

