

GENERAL SPECIFICATION

CORROSION

GS EP COR 163

Chemical treatments for corrosion control: Engineering and construction requirements

09	11/2019	Requirements for injection follow up added
08	11/2015	Precisions added on inhibition treatment and electrode materials used on chlorine units
07	05/2015	Organisation change - January 2015
06	12/2014	Removal of batch treatment and inhibitor selection paragraphs. Requirements summarized on synthetic tables
05	10/2009	Minimum content in active component increased for biocide, consistently with GS EP COR 002
00	10/2002	First issue
Rev.	Date	Purpose of the revision

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1. Scope

Engineering requirements applicable to the following anti-corrosion chemical treatments:

- Corrosion inhibitors
- Biocides
- Oxygen scavengers
- pH stabilisation
- Chlorination (with regard to corrosion control purpose).

This specification applies to all components of a production installation, onshore or offshore, which are in contact with process fluids (produced and injected fluids). Service and utility fluids are not relevant to this specification. Batch inhibitor treatments of pipelines and wells are not covered either by this specification.

This specification does not cover the technical specifications for the design and construction of chemicals injection skids, which are covered by **GS EP PVV 814**. It only provides the specific inputs related to corrosion treatment which are needed within this specification (storage tank sizing, injection rates, quality of products...).

Field implementation of chemical treatments during the production phase is not part of this specification.

2. Reference documents

The reference documents listed below form an integral part of this General Specification.

External Documents

Unless otherwise stipulated, the applicable version of these documents, including relevant appendices and addendums, is the latest revision published at the effective date of this document.

Reference	Title
Not applicable	

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Total General Specifications

Unless otherwise stipulated, the applicable version of these documents, including relevant appendices and addendums, is the latest revision published.

Reference	Title
GS EP COR 002	Corrosion control on production facilities: Field operations
GS EP PVV 814	Skid mounted units for chemical products injection systems
GS EP SPS 031	Chemical Injection Throttling Valves

3. Common requirements for all injection systems

Common requirements for all chemicals used for corrosion control are listed on § 5.1.

4. Injection rates

Maximum and average injection rates used for the design of injection systems as per § 5 shall be calculated from Maximum and average chemical dosages indicated in Table 1 (production) and Table 2 (injection), multiplied by the flow rate of the fluid to which the specified dosage (ref. [GS EP COR 002](#)). This fluid flow rate is the maximum predicted flow rate during the whole production period.

This fluid flow rate shall be the maximum predicted flow rate during the whole production period as indicated in Table 1.

In the specific case of low BSW (below 50%) the reference flowrate shall be the liquid flowrate (oil + water) as mention in § 5.2.

The concentrations given are based on pure commercial product.

If a dilution of the commercial product or a mixture with another type of product is foreseen, the sizing of the injection system shall be adjusted accordingly.

5. Chemical Specific requirements

5.1 Common requirements for chemical injection systems

5.1.1 Injection reliability

The injection system shall be designed to assure the maximum injection rate¹ at each injection point, including all pressure losses along the injection system.