

## Water seal systems – general layout instructions

### Scope

This standard provides instructions for the principle design of water seal systems and recommendations for ordering, installation and operation. The document is used as a basis during design and planning work, for example, and its objective is to reduce error sources and provide the right conditions in order to maintain a reliable water seal system.

### Changes since the previous edition

This edition differs from the previous one in that:

- Chapter 2 – "Water saving systems" has been adjusted for the measurement and regulation of seal water meters.

### Contents

<b>1 General</b>	<b>1</b>
1.1 Sealing water quality	1
1.2 Seals	1
1.3 Open or closed systems	2
1.4 Barrier liquid pressure	2
1.5 Sealing water flow and fouling	3
<b>2 Water saving systems</b>	<b>3</b>
<b>3 Documentation</b>	<b>3</b>
<b>4 Schematic diagrams</b>	<b>4</b>
4.1 Low and medium pressure system 9–12 bar	4
4.2 High pressure system 19 bar	5
4.3 Recirculating water seal system	6
<b>5 Seal water meters</b>	<b>7</b>
5.1 Outline diagrams	7
5.2 Inspection	8
5.3 Troubleshooting	9

### Appendix 1: Water seal specification

## 1 General

A water seal system requires access to water of a high level of purity irrespective of the system. An uninterrupted supply of water is also essential. There must be no valves that can be shut accidentally. A flushing valve must be fitted.

### 1.1 Sealing water quality

It is recommended that sealing water for systems should be measured with regard to particles etc. See Appendix 1 – "Water seal specification" for the parameters that can be specified. By experience, totally deionised water is not recommended.

### 1.2 Seals

Seals must be suited to the system's operating characteristics, whether the system will be operating continuously or intermittently, and offered by the system's preferred seal supplier.