



R1 42 01 01 Technical Directive

Hydraulics-directive for suppliers, erection
companies, managers and users
Part 1: Scope and application

Author: C. de Bruin

Issue: November 2003

Version: 3.0

Intended for the location IJmuiden

This is an unregistered document.

In case of future changes, amendments will not be sent to you.

The latest version can be retrieved from Intranet of Corus (Projectnet).

Information on:

Contents of document

PTC MTE WIT HPS

tel. +31 (0)251-4 93948

Standardisation

Standardisation office

tel. +31 (0)251-4 97693

Contents:

R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

INTRODUCTION

R1 42 01 01 16

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

1.1. THIS DOCUMENT INTENDS TO.....

R1 42 01 01 56

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

1.2. AIM.....

R1 42 01 0163

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

1.3. STANDARDS.....

R1 42 01 01 91

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

1.4. OTHER DOCUMENTS.....

R1 42 01 0199

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

1.4.1. Standards.....

R1 42 01 01 100

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

1.4.2. Conservation

R1 42 01 01 106

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

1.4.3. Drawing.....

R1 42 01 01 109

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

1.5. REFERENCES

R1 42 01 01113

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

1.6. STATEMENT

R1 42 01 01 125

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

Intentionally left blank

R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

Introduction

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

In general the directives can be split up in Directives for Engineering and Directives specific for Hydraulics-directive for suppliers, erection companiers, managers and users
Part 1: Scope and application

R142:01.01

Components.

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

Directives for Engineering

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

Consulting the Directives is very important for the realization of new or modernized equipment and Hydraulics-directive for suppliers, erection companiers, managers and users
R1.42.01.01
Part 1: Scope and application

systems. Many years of experience of hydraulics for Iron and Steel industries have been put in the
R1.42.01.01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

Directives. These industries are characterized by:

R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

- Heavy industrial equipment

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

- Continuous operation

R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

- High costs for unscheduled stops

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

This results in demands with regard to:

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

- Life time expectancy

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

- Reliability and availability

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

- Maintainability

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

The demands are understandably stern but need **not lead** to high costs for good designs.
R1.42.01.01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

The Engineering Directives can be found in Part 2:

General.

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

Component selection

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

The other paragraphs contain a selection of components preferably used at Corus IJmuiden.

R1.42.01.01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

The need for a central storage of standard spare parts (valves, cylinders, piping components etc.) is
R1.42.01.01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

still important for all Business Units. These components will therefore be required in most cases.
R1.42.01.01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

If components will be selected deviating from those mentioned in the Directives extra spare parts
B1.42:01.01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

have to be acquired.

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

For each project a selection of paragraphs of the Directive will be specified which are an integral part of the Hydraulics-directive for suppliers, erection companies, managers and users
Part 1: Scope and application

R1.42.01:01

part of the project-specification.

R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

The latest version of the Directive must be used.

R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

Deviations from the Directive are allowed only after consultation with the project engineer
R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

concerned.

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

IJmuiden, May 2002

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

1.1. THIS DOCUMENT INTENDS TO...

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

- Suppliers of hydraulics (as a part of enquiries and ordering specifications)
- R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

– Erection companies

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

– Users and managers of hydraulic systems

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

– The engineering department and education

R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

1.2. AIM

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

To realise appropriate hydraulics systems for Corus IJmuiden B.V.
R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

The reader consists of directives for engineering of hydraulics in the first place, further
R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

more requirements concerning drawings, (find) inspection, supply, erection and
R1.42.01.01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

commissionary.

R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

The directives are split up in groups for energy conversion and storage, conditioning, hydraulics-directive for suppliers, erection companies, managers and users
R1.42.01.01
Part 1: Scope and application

control, use, distribution and instrumentation.

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

Moreover, for each group are data available with a selection of components, of which
R1.42.01.01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

systems are to be constructed.

R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

Divided as follows:

R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 00 Contents

R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01 Scope and application

R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 02 General

R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 03 Selection of pumps

R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 04 Selection conditioning equipment

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 05 Selection control- and pressurevalves R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 06 Selection cylinders and hydromotors R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 07 Selection measuring-, directing- and control equipment
R1 42 01 01 Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 08 Selection piping

R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 09 Selection of seals

R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 10 Appendix.

R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

If other components are necessary or preferred, consult the hydraulic engineer involved.
R1.42:01.01:
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

1.3. STANDARDS

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

Apart from the components as listed in this issue, the application of certain components is
R1.42.01.01:
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

obligatory, for reasons of safety, environment and other legal requirements.
R1.42.01.01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

These components are listed in the Corus Standard for Hydraulics, R1.42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

S1 42 01 01, where accumulators with their safetyblocks and accessories, plus safety
R1 42 01:01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

valves can be found.

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

1.4. OTHER DOCUMENTS

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

1.4.1. Standards

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

Beside the Corus Standards and Technical Directives the National (NEN) and International
R1420101
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

(EN;ISO) standards for hydraulics are to be respected, unless otherwise agreed.
R1.42.01.01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

Of importance will be the European norm NEN-EN 982: Safety for machines, security
R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

requirements for fluidsystems and hydraulic components R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

1.4.2. Conservation

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

For conservation see Technical Directive R3 10 56 01, especially chapter 10.1.
R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

1.4.3. Drawing

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

For drawing requirements see Technical Directive R1 05 80 01, especially chapter 5.
R1 42 01: 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

1.5. REFERENCES

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

In this Technical Directive reference is made to:

R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

Corus Standard S1 42 01 01

R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

Technical Directives

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 05 80 01

R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R3 10 56 01

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

NEN-EN 982

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

1.6. STATEMENT

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

Version 1.0:

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

This document is a part of the Hydraulic directive for suppliers, erection companies,
Hydraulics-directive for suppliers, erection
companies, managers and users
Part 1: Scope and application

managers and users.

R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

This document replaces the HStandards for Hydraulics in the former serie 42.00
R1.42.01.01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

Version 2.0:

R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

Minor editorial changes and lay-out changes.

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

Version 2.1:

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

Introduction modified.

R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

R1 42 01 01

Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

Version 3.0:

R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application

Completely changed

R1 42 01 01
Hydraulics-directive for suppliers, erection
companiers, managers and users
Part 1: Scope and application