



**NSAI**  
Standards

Irish Standard  
I.S. EN 1829-2:2008

# High-pressure water jet machines - Safety requirements - Part 2: Hoses, hose lines and connectors

## I.S. EN 1829-2:2008

*Incorporating amendments/corrigenda/National Annexes issued since publication:*  
EN 1829-2:2008/AC:2011

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I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

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**EN 1829-2:2008/AC**

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English version  
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Deutsche Fassung

High-pressure water jet machines - Safety requirements - Part 2: Hoses,  
hose lines and connectors

Machines à jet d'eau à haute pression -  
Prescriptions de sécurité - Partie 2: Tuyaux  
flexibles, lignes de tuyauteries flexibles et  
éléments de raccordement

Hochdruckwasserstrahlmaschinen -  
Sicherheitstechnische Anforderungen - Teil  
2: Schläuche, Schlauchleitungen und  
Verbindungselemente

This corrigendum becomes effective on 9 February 2011 for incorporation in the three official language versions of the EN.

Ce corrigendum prendra effet le 9 février 2011 pour incorporation dans les trois versions linguistiques officielles de la EN.

Die Berichtigung tritt am 9. Februar 2011 zur Einarbeitung in die drei offiziellen Sprachfassungen der EN in Kraft.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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## **1 Modification to 6.1.1, General**

*Replace in 6.1.1 the last sentence:*

"The tests 1 – 5 can be type tests combined with a verification of the conformity of individual products to the type."

*with:*

"The tests 1 to 6 can be type tests combined with a verification of the conformity of individual products to the type."

I.S. EN 1829-2:2008

EUROPEAN STANDARD

**EN 1829-2**

NORME EUROPÉENNE

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English Version

## High-pressure water jet machines - Safety requirements - Part 2: Hoses, hose lines and connectors

Machines à jet d'eau à haute pression - Prescriptions de  
sécurité - Partie 2 : Tuyaux flexibles, lignes de tuyauteries  
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Hochdruckwasserstrahlmaschinen - Sicherheitstechnische  
Anforderungen - Teil 2: Schläuche, Schlauchleitungen und  
Verbindungselemente

This European Standard was approved by CEN on 23 February 2008.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN Management Centre has the same status as the official versions.

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## **Foreword**

This document (EN 1829-2:2008) has been prepared by Technical Committee CEN/TC 197 “Pumps”, the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2008, and conflicting national standards shall be withdrawn at the latest by October 2008.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative annexes ZA and ZB, which are an integral part of this document.

EN 1829 consists of the following parts, under the general title ‘High-pressure water jet machines – Safety requirements’:

– Part 1: Machines

– Part 2: Hoses, hose lines and connectors

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

## **Introduction**

This European Standard is a type C standard as stated in EN ISO 12100-1.

The machinery concerned and the extent to which hazards, hazardous situations and hazardous events are covered are indicated in the scope of this European Standard.

When provisions of this type C standard are different from those which are stated in type A or B standards, the provisions of this type C standard take precedence over the provisions of the other standards, for machines that have been designed and built according to the provisions of this type C standard.



## **1 Scope**

This European Standard applies to hoses, hose lines and connectors intended to be used with high-pressure water jet machines within the scope of prEN 1829-1.

This European Standard deals with all significant hazards, hazardous situations and events relevant to the equipment in the scope, when it is used as intended and under conditions of misuse which are reasonably foreseeable by the manufacturer (see clause 4).

This European Standard deals with safety requirements to minimise the significant hazards which can arise from assembling, operating and servicing of hoses, hose lines and connectors for use with high pressure water jet machines (see clause 5).

NOTE 1 This European Standard does not cover leak shields since they are not part of a hose line.

The hazard due to scalding from hot liquid or from irritation / burning of any added chemicals is not covered in this European Standard.

This European Standard is not applicable to hoses, hose lines and their accessories, which are manufactured before the date of its publication as EN.

NOTE 2 For products of similar application that are outside of the scope of this European Standard and for which there is no alternative document available the relevant Clauses of this European Standard may be used.

## 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

prEN 1829-1:2007, *High-pressure water jet machines – Safety requirements – Part 1: Machines*

EN ISO 1402:1996, *Rubber and plastics hoses and hose assemblies – Hydrostatic testing (ISO 1402:1994)*

EN ISO 4672:1999, *Rubber and plastics hoses – Sub-ambient temperature flexibility tests (ISO 4672:1997)*

EN ISO 6803, *Rubber or plastics hoses and hose assemblies – Hydraulic-pressure impulse test without flexing (ISO 6803:1994)*

EN ISO 12100-1:2003, *Safety of machinery - Basic concepts, general principles for design – Part 1: Basic terminology, methodology (ISO 12100-1:2003)*

EN ISO 12100-2, *Safety of machinery - Basic concepts, general principles for design – Part 2: Technical principles (ISO 12100-2:2003)*

ISO 7010:2003, *Graphical symbols – Safety colours and safety signs – Safety signs used in workplaces and public areas*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 12100-1:2003, prEN 1829-1:2007 and the following apply.

### 3.1

#### **burst pressure**

static pressure that destroys the hose line and allows the liquid to escape

### 3.2

#### **interconnected hose lines**

several hose lines which have been connected to each other

### 3.3

#### **connector safety devices**

parts or components to restrain movement of the hose line if the connector fails (e.g. locking collars, hose sleeves, etc.)

## 4 List of significant hazards

### 4.1 General

This Clause contains all the significant hazards, hazardous situations and events, as far as they are dealt with in this European Standard, identified by risk assessment as significant for this type of machinery and which require action to eliminate or reduce the risk.

### 4.2 Hazards due to bursting or leaking of hoses

Hazards can occur when a hose bursts or leaks. The escaping stream of liquid can cause physical damage and also a sudden repositioning of the hose line in a dangerous manner (whip).

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