



**DOCUMENTACIÓN DE CALIDAD**  
Tubería de fundición dúctil



## Guión de documentación de calidad Electrosteel

Estimados Señores,

Respetando el orden establecido en el siguiente guión se adjuntan los siguientes certificados:

- 1.- Certificado conforme a la norma ISO 9001 garantiza la existencia de un Sistema de Gestión de la Calidad durante el proceso de fabricación.
- 2.- Certificado conforme a la norma ISO 14001 de nuestra fábrica que garantiza la existencia de un Sistema de Gestión Medioambiental.
- 3.- Certificado de conformidad de producto según la norma EN 545 y certificado de licencia de producto.
- 4.- Certificado de conformidad de producto según la norma ISO 2531 y certificado de licencia de producto.
- 5.- Certificado de conformidad de producto según la norma EN 681-1 y certificado de licencia de producto.
- 6.- Declaración del fabricante para materiales en contacto con agua de consumo humano, en cumplimiento del Anexo I del RD 140/2003, de 7 de febrero, en cuanto a la aptitud alimentaria de los productos en contacto con el agua potable.
- 7.- Certificado de conformidad sanitaria de todos los productos en contacto con agua para consumo humano según reglamentaciones vigentes en los siguientes países de la Unión Europea: Francia, Inglaterra, Alemania. [Importante: Se deben presentar todos y cada uno de los certificados de un mismo país]
  - i. Certificado de alimentabilidad específica del mortero de cemento.
  - ii. Certificado alimentabilidad de la pasta lubricante
  - iii. Certificado alimentabilidad del barniz bituminoso
  - iv. Certificado alimentabilidad de la junta de elastómero



8.- Ejemplo de certificado tipo 2.2. en base a la norma EN 10204 y la verificación de los mismos respecto a un marcado de tubería legible y duradero en todos los tubos.

9.- Declaración de conformidad de acuerdo con la norma EN 10204 referente a Materiales metálicos. Tipos de inspección.

10.- Certificado de cumplimiento con Directiva Europea - 98/83/CE

11.- Marcado tubería Electrosteel.

Madrid, 20 de Enero de 2017

Departamento Técnico

# Certificado de Registro

## SISTEMA DE GESTIÓN DE LA CALIDAD - ISO 9001:2008

Este documento certifica que:

**ELECTROSTEEL EUROPE S.A.**  
**SUCURSAL EN ESPAÑA**  
Oficina Central  
C/ Velazquez, 19  
28001 Madrid  
España

Dispone del certificado N°:

**FS 640471**

y mantiene operativo un Sistema de Gestión de la Calidad que cumple los requisitos de ISO 9001:2008 para las actividades indicadas en el siguiente alcance:

Comercialización y almacenamiento de tubería, racores y accesorios de fundición dúctil y sus juntas para canalizaciones de agua y aplicaciones de saneamiento. Aplicación de recubrimientos de tubería de fundición dúctil.

Por y en nombre de BSI:



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Frank Lee, EMEA Compliance & Risk Director

Fecha de certificación inicial: 22/02/2016

Fecha de última emisión: 22/02/2016

Fecha efectiva: 22/02/2016

Fecha de caducidad: 15/09/2018

Página: 1 de 2

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Este certificado fue emitido electrónicamente, es propiedad de BSI y está sujeto a las condiciones contractuales.

Un certificado electrónico puede ser autenticado [en la web de BSI](http://www.bsigroup.es/es/certificacion-y-auditoria/Busqueda-directorio-de-certificados-clientes/Directorio-de-certificados-y-clientes/).

Las copias impresas pueden ser validadas en [www.bsigroup.es/es/certificacion-y-auditoria/Busqueda-directorio-de-certificados-clientes/Directorio-de-certificados-y-clientes/](http://www.bsigroup.es/es/certificacion-y-auditoria/Busqueda-directorio-de-certificados-clientes/Directorio-de-certificados-y-clientes/) o teléfono +34 914008620.

Información y Contacto: BSI Kitemark Court, Davy Avenue, Knowhill, Milton Keynes MK5 8PP, Tel +44 845 080 9000.

BSI Garantía Reino Unido Limited, registradas en Inglaterra bajo el número 7805321 en 389 Chiswick High Road, London W4 4AL, Reino Unido.

Miembro de BSI Group.



Certificado Nº: **FS 640471**

Centro de trabajo

Alcance del centro de trabajo:

ELECTROSTEEL EUROPE S.A.  
SUCURSAL EN ESPAÑA  
Oficina Central  
C/ Velazquez, 19  
28001 Madrid  
España

Comercialización de tubería, racores y accesorios de fundición dúctil y sus juntas para canalizaciones de agua y aplicaciones de saneamiento.

ELECTROSTEEL EUROPE S.A.  
SUCURSAL EN ESPAÑA  
Planta de Logística  
C/ Blanquers, nº58-72, Parcela S3 del Polígono Industrial de Valls  
43800 Valls  
Tarragona  
España

Comercialización y almacenamiento de tubería, racores y accesorios de fundición dúctil y sus juntas para canalizaciones de agua y aplicaciones de saneamiento. Aplicación de recubrimientos de tubería de fundición dúctil.

ELECTROSTEEL EUROPE S.A.  
SUCURSAL EN ESPAÑA  
Edificio Forum - Ctra. Sant Cugat a Rubí, 40  
08174 Sant Cugat del Vallés  
Barcelona  
España

Comercialización de tubería, racores y accesorios de fundición dúctil y sus juntas para canalizaciones de agua y aplicaciones de saneamiento.

ELECTROSTEEL EUROPE S.A.  
SUCURSAL EN ESPAÑA  
Almacén  
Poligono Industrial Milenium  
Avda del Alumini, 4  
43470 La Selva del Camp  
Tarragona  
España

Comercialización y almacenamiento de tubería, racores y accesorios de fundición dúctil y sus juntas para canalizaciones de agua y aplicaciones de saneamiento.

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Página: 2 de 2

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Información y Contacto: BSI Kitemark Court, Davy Avenue, Knowhill, Milton Keynes MK5 8PP, Tel +44 845 080 9000.

BSI Garantía Reino Unido Limited, registradas en Inglaterra bajo el número 7805321 en 389 Chiswick High Road, London W4 4AL, Reino Unido.

Miembro de BSI Group.

# Certificate of Registration

## QUALITY MANAGEMENT SYSTEM - ISO 9001:2008

This is to certify that:

Electrosteel Casting Limited  
30 and 48 B.T. Road  
P.O. Sukchar  
Dist. 24 Parganas (North)  
West Bengal  
700115  
India

Holds Certificate Number:

FM 45346

and operates a Quality Management System which complies with the requirements of ISO 9001:2008 for the following scope:

**Design, development, manufacture and supply of centrifugally cast ductile iron pipes, fittings, accessories and their joints for water, sewerage, gas and ash pipelines and related customer service.**

For and on behalf of BSI:



Frank Lee, EMEA Compliance & Risk Director

Original Registration Date: 19/03/1999

Latest Revision Date: 18/12/2015

Effective Date: 16/02/2016

Expiry Date: 14/09/2018



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Certificate No: FM 45346

Location	Registered Activities
Electrosteel Casting Limited 30 and 48 B.T. Road P.O. Sukchar Dist. 24 Parganas (North) West Bengal 700 115 India	Top Management, management system functions, training, design and development, production of ductile iron pipes and fittings, quality assurance, customer service, despatch and purchasing.
Electrosteel Castings Limited 49 B.T.Road P.O. Sukchar Dist. 24 Parganas (North) West Bengal 700 115 India	Fettling, finishing, final testing and inspection and despatch of ductile iron fittings and accessories.
Electrosteel Castings Limited 19 Camac Street Kolkata West Bengal 700 017 India	Sales, marketing and customer service.
Electrosteel Castings Limited Bansberia works Village: Chak Bansberia P.O: Bansberia Dist. Hooghly West Bengal 712 121 India	Coating and despatch of pipes, production (coating), quality control, management of calibration, training, maintenance, stores and despatch.
Electrosteel Castings Limited Village: Kashberia P.O.: Shibramnagar Haldia Dist. Purba Medinipur West Bengal 721 635 India	Production of ductile iron fittings and accessories, fettling, finishing, quality control, maintenance, packing, stores and despatch.

Original Registration Date: 19/03/1999

Latest Revision Date: 18/12/2015

Effective Date: 16/02/2016

Expiry Date: 14/09/2018

Page: 2 of 2

This certificate was issued electronically and remains the property of BSI and is bound by the conditions of contract.

An electronic certificate can be authenticated [online](#).

Printed copies can be validated at [www.bsigroup.com/ClientDirectory](http://www.bsigroup.com/ClientDirectory)



## CERTIFICATE OF APPROVAL

Issued by Indian Register Quality Systems  
(A Division of IRCLASS Systems and Solutions Private Limited)

This is to certify that the Environmental Management System of

**Organisation:** Electrosteel Castings Limited

**Address:** Khardah Works :  
30,48 & 49 B. T. Road, Khardah,  
P. O. Sukchar, 24 Parganas (North),  
Kolkata - 700 115

Bansberia Works :  
P.O. Adconagar, Dist.: Hooghly,  
West Bengal - 712 121

has been assessed and found conforming to the following requirement

**Standard Certified:** ISO 14001: 2004

**Scope:** Design, Manufacture, Supply and Service  
of Centrifugally Cast Ductile Iron Pipes,  
Ductile Iron Pipe Fittings, Accessories &  
Jointing Materials for Water, Sewerage,  
Gas and Ash Transportation Pipelines

**Certificate No.:** IRQS/1530040 granted on: 17<sup>th</sup> January 2015

**Originally Certified:** 25/03/2003 **Current Issue Date:** 25/03/2015 **Valid Till Date:** 24/03/2018



Indian Register Quality Systems



**Shashi Nath Mishra**  
Head IRQS

This approval is subject to continued satisfactory maintenance of the Environmental Management System of the organization to the above standard, which will be monitored by IRQS. The use of the Accreditation Mark indicates accreditation with respect to activities covered by the certificate with accreditation no. C071

Condition Overleaf

**Head Office:** 52A, Adi Shankaracharya Marg.Opp.Powai Lake, Powai, Mumbai - 400 072, India.



# Kitemark™ Licence

This is to certify that:

## **Electrosteel Castings Limited**

30 B.T. Road  
Khardah  
24 Parganas (North)  
West Bengal  
700 115  
India

Holds Kitemark Licence Number:

**KM 39560**

In respect of:

**BS EN 545**

**Ductile iron pipes, fittings, accessories and their joints for water pipelines**

This issues the right and Licence to use the Kitemark in accordance with the Kitemark Terms and Conditions governing the use of the Kitemark, as may be updated from time to time by BSI Assurance UK Ltd (the "Conditions"). All defined terms in this Licence shall have the same meaning as in the Conditions.

The use of the Kitemark is authorized in respect of the Product(s) detailed on this Licence provided at or from the above address.

For and on behalf of BSI:

Gary Fenton, Global Assurance Director

First Issued: 12/05/1998

Latest Issue: 13/06/2014



## No. KM 39560

### BS EN 545:2010 - Ductile iron pipes, fittings, accessories and their joints for water pipelines. Requirements and test methods.

#### Ductile iron pipe:

Description	Nominal Size	Length (m)
Pipes with push-in flexible joints	DN 80 – DN 300 (inc.) Class 40	5.5 or 6.0
Pipes with push-in flexible joints	DN 80 – DN 1100 (inc.) Class K & C Series	5.5 or 6.0
Pipes with restrained joint - ELECTROLOCK®	DN 80 – DN 700 (inc.) Class K & C Series	5.5 or 6.0
Pipes with welded on flanges	DN 80 – DN 1100 (inc.)	Up to 5.5

#### Ductile iron pipe fittings:

Type	Size Range
Flanged Sockets	DN 80 – DN 1000
Flanged Spigots	DN 80 – DN 1000
Collars (MJC) & Socket	DN 80 – DN 1000
Double Socket 45° Bends	DN 80 – DN 1000
Double Socket 22° 30' Bends	DN 80 – DN 1000
Double Socket 11°15' Bends	DN 80 – DN 1000
Double Socket 90° Bends	DN 80 – DN 300
Double Flange 11°15' Bends	DN 80 – DN 400
Double Flange 22° 30' Bends	DN 80 – DN 400
Double Flange 45° Bends	DN 80 – DN 1000
Double Flange 90° Bends	DN 80 – DN 1000
Double Flange Duck-Foot Bend	DN 80 – DN 600
All Socket Tees	DN 80 – DN 300
Double-Socket Tees with Flanged Branch	DN 80 – DN 1000
Double Socket Tapers	DN 80 – DN 1000
Double Flange Tapers	DN 80 – DN 1000
All-Flanged Tees	DN 80 – DN 1000
Blank Flanges	DN 80 – DN 1000

A range of fittings complying with the technical requirements of BS EN 545 but not described in clauses 8.3 & 8.4 are also certified - BSI Test Report 285/7174836 refers.

First Issued: 12/05/1998

Latest Issue: 13/06/2014





# Kitemark™ Licence

This is to certify that:

## **Electrosteel Castings Limited**

30 B.T. Road  
Khardah  
24 Parganas (North)  
West Bengal  
700 115  
India

Holds Kitemark Licence Number:

**KM 34577**

In respect of:

**BS ISO 2531**

**Ductile iron pipes, fittings, accessories and their joints for water applications**

This issues the right and Licence to use the Kitemark in accordance with the Kitemark Terms and Conditions governing the use of the Kitemark, as may be updated from time to time by BSI Assurance UK Ltd (the "Conditions"). All defined terms in this Licence shall have the same meaning as in the Conditions.

The use of the Kitemark is authorized in respect of the Product(s) detailed on this Licence provided at or from the above address.

For and on behalf of BSI:

Gary Fenton, Global Assurance Director

First Issued: 23/07/1996

Latest Issue: 13/06/2014



## No. KM 34577

**BS ISO 2531:2009 - Ductile iron pipes, fittings, accessories and their joints for water applications.**

### Ductile iron pipe:

Description	Nominal Size	Length (m)
Pipes with push-in flexible joints	DN 80 – DN 300 (inc.) Class 40	5.5 or 6.0
Pipes with push-in flexible joints	DN 80 – DN 1100 (inc.) Class K & C Series	5.5 or 6.0
Pipes with restrained joint - ELECTROLOCK®	DN 80 – DN 700 (inc.) Class K & C Series	5.5 or 6.0
Pipes with welded on flanges	DN 80 – DN 1100 (inc.)	Up to 5.5

### Ductile iron pipe fittings:

Type	Size Range
Flanged Sockets	DN 80 – DN 1000
Flanged Spigots	DN 80 – DN 1000
Collars (MJC) & Socket	DN 80 – DN 1000
Double Socket 45° Bends	DN 80 – DN 1000
Double Socket 22° 30' Bends	DN 80 – DN 1000
Double Socket 11°15' Bends	DN 80 – DN 1000
Double Socket 90° Bends	DN 80 – DN 300
Double Flange 11°15' Bends	DN 80 – DN 400
Double Flange 22° 30' Bends	DN 80 – DN 400
Double Flange 45° Bends	DN 80 – DN 1000
Double Flange 90° Bends	DN 80 – DN 1000
Double Flange Duck-Foot Bend	DN 80 – DN 600
All Socket Tees	DN 80 – DN 300
Double-Socket Tees with Flanged Branch	DN 80 – DN 1000
Double Socket Tapers	DN 80 – DN 1000
Double Flange Tapers	DN 80 – DN 1000
All-Flanged Tees	DN 80 – DN 1000
Blank Flanges	DN 80 – DN 1000

A range of fittings complying with the technical requirements of BS ISO 2531 but not described in clauses 8.3 & 8.4 are also certified - BSI Test Report 285/7174836 refers.

First Issued: 23/07/1996

Latest Issue: 13/06/2014

# Kitemark™ Certificate

This is to certify that:

Andhra Polymers Private Limited  
Plot No.2  
Phase-V  
IDA Jeedimetla  
Hyderabad  
Andhra Pradesh  
500 055  
India

Holds Certificate Number:

KM 555689

In respect of:

**BS EN 681-1**

**Elastomeric seals - Material requirements for pipe joint seals used in water and drainage application**

This issues the right and licence to use the Kitemark in accordance with the Kitemark Terms and Conditions governing the use of the Kitemark, as may be updated from time to time by BSI Assurance UK Ltd (the "Conditions"). All defined terms in this Certificate shall have the same meaning as in the Conditions.

The use of the Kitemark is authorized in respect of the Product(s) detailed on this Certificate provided at or from the above address.

For and on behalf of BSI:

Gary Fenton, Global Product Certification Director

First Issued: 16/10/2009

Latest Issue: 18/08/2015



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To check its validity telephone +44 (0) 845 080 9000. An electronic certificate can be authenticated [online](#).

BSI Assurance UK Limited, registered in England under number 7805321 at 389 Chiswick High Road, London W4 4AL, UK.  
A member of BSI Group of Companies.



# Kitemark™ Certificate

No. KM 555689

**BS EN 681-1:1996 - Elastomeric seals. Material requirements for pipe joint seals used in water and drainage applications. Vulcanized rubber.**

## Hardness Class - 55

Compound Reference	Product Description	Type	Size range
EP 53	Reka Ring/Seal	BS EN 681-1 WA/WC	DN 80 to DN 4000
SA 54	Tyton Ring/Seal Bulb	BS EN 681-1 WA/WC	DN 80 to DN 2000
EP 55 NSF	Reka Ring/Seal	BS EN 681-1 WA/WC	DN 80 to DN 4000
EP 55 ASTM	'O' Ring/Seal	BS EN 681-1 WA/WC	DN 200 to DN 2600
EW-54 /EP-55 VIP	Tyton Ring/Seal (Push On) Bulb, Ultrarib Gasket	BS EN 681-1 WA/WC	DN 80 to DN 1400
NBR 55 VIP	Tyton Ring/Seal (Push On) Bulb	BS EN 681-1 WG	DN 80 to DN 1400

## Hardness Class - 50

Compound Reference	Product Description	Type	Size range
EW 48/EWA 8250	Tyton Ring/Seal (Push On) Bulb, Reka Ring/Seal, K type Joint Rubber Ring /Mechanical Joint	BS EN 681-1 WA/WC	DN 80 to DN 4000
EW 48 A	Tyton Ring/Seal (Push On) Bulb	BS EN 681-1 WA/WC	DN 80 to DN 1400
EP 48 F	Tyton Ring/Seal (Push On) Bulb	BS EN 681-1 WA/WC	DN 80 to DN 1400
EP 48	Tyton Ring/Seal (Push On) Bulb,	BS EN 681-1 WA/WC	DN 80 to DN 1400
EP 48B	Tyton Ring/Seal (Push On) Bulb	BS EN 681-1 WA/WC	DN 80 to DN 1400
NBR 50	Tyton Ring/Seal (Push On) Bulb, Reka Ring/Seal.	BS EN 681-1 WG	DN 80 to DN 2000
WRC50/EP 48 NSF	Tyton Ring/Seal (Push On) Bulb, Reka Ring/Seal	BS EN 681-1 WA/WC	DN 80 to DN 4000
EP 50	'O' Ring/Seal	BS EN 681-1 WA/WC	DN 200 to DN 2600
EP 52	Reka Ring/Seal	BS EN 681-1 WA/WC	DN 80 to DN 4000
EP-48 VIP	Lip Seal	BS EN 681-1 WA/WC	DN 600
EP 48 FRIL	Reka Ring/Seal	BS EN 681-1 WA/WC	DN 80 to DN 4000

First Issued: 16/10/2009

Latest Issue: 18/08/2015

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A member of BSI Group of Companies.



# Kitemark™ Certificate

No. KM 555689

**BS EN 681-1:1996 - Elastomeric seals. Material requirements for pipe joint seals used in water and drainage applications. Vulcanized rubber (continued).**

## Hardness Class - 80

Compound Reference	Product Description	Type	Size range
EW 80/EWA 8180	Tyton Ring/Seal (Push On) Heel	BS EN 681-1 WA/WC	DN 80 to DN 2000
EW 80A	Tyton Ring/Seal (Push On) Heel	BS EN 681-1 WA/WC	DN 80 to DN 2000
EP 80	Tyton Ring/Seal (Push On) Heel	BS EN 681-1 WA/WC	DN 80 to DN 2000
EFG 80	Flange Gasket	BS EN 681-1 WA/WC	DN 80 to DN 1400
EW-81 VIP	Tyton Ring/Seal (Push On) Heel, Matra gasket, Megafit Gasket	BS EN 681-1 WA/WC	DN 80 to DN 1400
EP-82 VIP	Tyton Ring/Seal (Push On) Heel	BS EN 681-1 WA/WC	DN 80 to DN 1400
NBR 80/NBR 80T/NBR 80VIP	Tyton Ring/Seal (Push On) Heel, Matra, Megafit, Quickfit Gaskets.	BS EN 681-1 WG	DN 80 to DN 2000

## Hardness Class - 60

Compound Reference	Product Description	Type	Size range
EP 61	O Ring/Seal & V Ring/Seal	BS EN 681-1 WA/WC	DN 100 to DN 600
EW 60	Tyton Ring/Seal	BS EN 681-1 WA/WC	DN 80 to DN 1400
EP 60 ASTM	O Ring/Seal	BS EN 681-1 WA/WC	DN 200 to DN 2600
EP 60	Reka Ring/Seal	BS EN 681-1 WA/WC	DN 80 to DN 4000

## Hardness Class - 65

Compound Reference	Product Description	Type	Size range
EW 65 2GS/EWA 9165	Standard Gasket	BS EN 681-1 WA/WC	DN 80 to DN1800
EW 65 VIP	NIC Gasket/Repair Mat	BS EN 681-1 WA/WC	DN 500
EP 68	Reka Ring/Seal	BS EN 681-1 WA/WC	DN 80 to DN 4000
NBR 65	O Ring/Seal	BS EN 681-1 WG	DN 200 to DN 4000

First Issued: 16/10/2009

Latest Issue: 18/08/2015

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# Kitemark™ Certificate

No. KM 555689

**BS EN 681-1:1996 - Elastomeric seals. Material requirements for pipe joint seals used in water and drainage applications. Vulcanized rubber (continued).**

## Hardness Class - 70

Compound Reference	Product Description	Type	Size range
WRC 70	EMJ Gasket, Flange Gasket	BS EN 681-1 WA/WC	DN 80 to DN 800
EP-70	EMJ/Mechanical Joint Gasket, Reka Ring/Seal	BS EN 681-1 WA/WC	DN 80 to DN 800 DN 80 to DN 4000
NBR-70/NBR 70VIP	2 GS/Standard Gaskets , EMJ/ Mechanical Joint Gasket, Reka Ring/Seal	BS EN 681-1 WG	DN 80 to DN 2000

First Issued: 16/10/2009

Latest Issue: 18/08/2015

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BSI Assurance UK Limited, registered in England under number 7805321 at 389 Chiswick High Road, London W4 4AL, UK.  
A member of BSI Group of Companies.



RH/PR  
Ref. 03/2014

ELECTROSTEEL EUROPE, S.A.  
Edif. Forum. Ctra. de Sant Cugat a Rubí  
08190 Sant Cugat a Rubí  
Barcelona

En relación con la Documentación aportada por Ustedes con Nº de Entrada en la Unidad de Agua de Consumo humano 3-1300 en el Registro General del Ministerio de Sanidad y Consumo, le comunico lo siguiente:

- 1º La Documentación será sometida a un primer examen, para comprobar si se ajusta a los requisitos del ANEXO IX del REAL DECRETO 140/2003, de 7 de febrero, por el que se establecen los criterios sanitarios de la calidad del agua de consumo humano.
- 2º Si no cumple los requisitos se les comunicará, para que subsanen las deficiencias, enviando la Documentación oportuna.
- 3º Toda la información remitida será revisada y evaluada detalladamente, con el fin de comprobar si cumple los requisitos para poder elaborar el Censo de productos de construcción en contacto con el agua de consumo humano, de acuerdo a lo dispuesto en la Disposición transitoria cuarta del REAL DECRETO 140/2003, antes mencionado.

Madrid, 28 de noviembre de 2003  
EL SUBDIRECTOR GENERAL,



Fdo: Francisco Marqués Marqués



LA EMPRESA ELECTROSTEEL, PRESENTA EN MANO DOCUMENTACIÓN ADICIONAL A LA YA ENTREGADA ANTERIORMENTE DE ACUERDO CON LA DISPOSICIÓN TRANSITORIA 4ª, DEL REAL DECRETO 140/2003 PARA LLEVAR A CABO EL CENSO DE PRODUCTOS DE CONSTRUCCIÓN EN CONTACTO CON EL AGUA DE CONSUMO HUMANO.

MADRID, 9 DE OCTUBRE DE 2003





**CERT**

# DVGW-Baumusterprüfzertifikat

## DVGW type examination certificate

**DW-7801BP0330**

Registriernummer  
registration number

<b>Anwendungsbereich</b> <i>field of application</i>	Produkte der Wasserversorgung <i>products of water supply</i>
<b>Zertifikatinhaber</b> <i>owner of certificate</i>	Electrosteel Castings Limited G K Tower, 19 Camac Street, IND-700017 Calcutta
<b>Vertreiber</b> <i>distributor</i>	Electrosteel Castings Limited G K Tower, 19 Camac Street, IND-700017 Calcutta
<b>Produktart</b> <i>product category</i>	Guss- und Stahlrohre für Trinkwasserversorgung: Rohre aus duktilem Gusseisen (7801)
<b>Produktbezeichnung</b> <i>product description</i>	Rohre aus duktilem Gusseisen für die Trinkwasserversorgung
<b>Modell</b> <i>model</i>	Gusseisenrohr "ELECTROSTEEL"
<b>Prüfberichte</b> <i>test reports</i>	Mechanikprüfung: 11 7415 12-01 vom 12.02.2013 (MPG) Mechanikprüfung: 11 7415 11 vom 12.02.2012 (MPG) KTW-Prüfung: K-172236-09-Ko/sf vom 13.01.2009 (WHY) Mikrobiologische Prüfung: W-175293-09-SI vom 06.04.2009 (WHY) KTW-Prüfung: KA 361/08 vom 04.11.2008 (TZW)
<b>Prüfgrundlagen</b> <i>test basis</i>	DVGW GW 337-P (01.09.2010) DIN EN 545 (01.09.2011) DVGW W 347 (01.04.2006) DVGW W 348 (01.09.2004) BGA KTW (12.12.1985) DVGW W 270 (01.11.2007)
<b>Ablaufdatum / AZ</b> <i>date of expiry / file no.</i>	27.06.2018 / 13-0317-WNV

2008-01-01 DE



21.06.2013 GI A-1/2

Datum, Bearbeiter, Blatt, Leiter der Zertifizierungsstelle  
date, issued by, sheet, head of certification body

DVGW CERT GmbH ist von der DAkkS nach DIN EN 45011:1998  
akkreditierte Stelle für die Zertifizierung von Produkten der Energie- und  
Wasserversorgung.

DVGW CERT GmbH is an accredited body by DAkkS according to EN  
45011:1998 for certification of products for energy and water supply industry.



Deutsche  
Akkreditierungsstelle  
D-ZE-16028-01-01

DVGW CERT GmbH  
Zertifizierungsstelle

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53123 Bonn

Tel. +49 228 91 88 - 888  
Fax +49 228 91 88 - 993

www.dvgw-cert.com  
info@dvgw-cert.com

<b>Typ</b> <i>type</i>	<b>Technische Daten</b> <i>technical data</i>	<b>Bemerkungen</b> <i>remarks</i>
Gusseisenrohr "ELECTROSTEEL"	Fertigungsgruppe: DN 80 bis DN 1100	

<b>Ausführungsvariante</b> <i>type variation</i>	<b>Erläuterungen</b> <i>explanations</i>
Push-On Joint	Steckmuffenverbindung, DN 80 bis DN 1100
Restrained Joint	Steckmuffenverbindung, DN 80 bis DN 1100
Flansch, aufgeschraubt	Flanschverbindung, DN 80 bis DN 600 (PN 10, PN 16, PN 25, PN 40); DN 700 bis DN 1000 (PN 10, PN 16, PN 25)
Flansch, angeschweißt	Flanschverbindung, DN 80 bis DN 600 (PN 10, PN 16, PN 25, PN 40); DN 700 bis DN 1000 (PN 10, PN 16, PN 25)

### **Verwendungshinweise / Bemerkungen**

#### ***hints of utilization / remarks***

Auskleidung: Zementmörtelauskleidung nach DIN EN 545

Beschichtungen und Umhüllungen: Zinküberzug mit Deckschicht nach DIN EN 545; Zink-Aluminiumüberzug mit Deckschicht nach DIN EN 545

DVGW





**CERT**

# DVGW type examination certificate

## DVGW-Baumusterprüfzertifikat

**DW-7801BP0330**

Registration Number  
Registriernummer

<b>Field of Application</b> <i>Anwendungsbereich</i>	products of water supply <i>Produkte der Wasserversorgung</i>
<b>Owner of Certificate</b> <i>Zertifikatinhaber</i>	Electrosteel Castings Limited G K Tower, 19 Camac Street, IND-700017 Calcutta
<b>Distributor</b> <i>Vertreiber</i>	Electrosteel Castings Limited G K Tower, 19 Camac Street, IND-700017 Calcutta
<b>Product Category</b> <i>Produktart</i>	cast iron and steel pipes for water pipelines: Ductile iron pipes (7801)
<b>Product Description</b> <i>Produktbezeichnung</i>	ductile iron pipes for the drinking water supply
<b>Model</b> <i>Modell</i>	Gusseisenrohr "ELECTROSTEEL"
<b>Test Reports</b> <i>Prüfberichte</i>	mechanical test: 11 7415 12-01 from 12.02.2013 (MPG) mechanical test: 11 7415 11 from 12.02.2012 (MPG) KTW testing: K-172236-09-Ko/sf from 13.01.2009 (WHY) hygienic testing: W-175293-09-SI from 06.04.2009 (WHY) KTW testing: KA 361/08 from 04.11.2008 (TZW)
<b>Test Basis</b> <i>Prüfgrundlagen</i>	DVGW GW 337-P (01.09.2010) DIN EN 545 (01.09.2011) DVGW W 347 (01.04.2006) DVGW W 348 (01.09.2004) BGA KTW (12.12.1985) DVGW W 270 (01.11.2007)
<b>Date of Expiry / File No.</b> <i>Ablaufdatum / Aktenzeichen</i>	27.06.2018 / 13-0317-WNV

21.06.2013 GI A-1/2

Date, Issued by, Sheet, Head of Certification Body  
Datum, Bearbeiter, Blatt, Leiter der Zertifizierungsstelle

DVGW CERT GmbH is an accredited body by DAkkS according to EN 45011:1998 for certification of products for energy and water supply industry.

DVGW CERT GmbH ist von der DAkkS nach DIN EN 45011:1998 akkreditierte Stelle für die Zertifizierung von Produkten der Energie- und Wasserversorgung.



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info@dvgw-cert.com

<b>Type</b> <i>Typ</i>	<b>Technical Data</b> <i>Technische Daten</i>	<b>Remarks</b> <i>Bemerkungen</i>
Gusseisenrohr "ELECTROSTEEL"	manufacturing group: DN 80 up to DN 1100	

<b>Type Variation</b> <i>Ausführungsvariante</i>	<b>Explanations</b> <i>Erläuterungen</i>
Push-On Joint	push-in-socket connection, DN 80 up to DN 1100
Restrained Joint	push-in-socket connection, DN 80 up to DN 1100
Flansch, aufgeschraubt	flange connection, DN 80 up to DN 600 (PN 10, PN 16, PN 25, PN 40); DN 700 up to DN 1000 (PN 10, PN 16, PN 25)
Flansch, angeschweißt	flange connection, DN 80 up to DN 600 (PN 10, PN 16, PN 25, PN 40); DN 700 up to DN 1000 (PN 10, PN 16, PN 25)

#### **Hints of Utilization / Remarks**

##### ***Verwendungshinweise / Bemerkungen***

lining: cement mortar according to DIN EN 545

coatings: zinc coating with overlay according to DIN EN 545; zinc-aluminum coating with overlay according to DIN EN 545

DVGW





**CERT**

# DVGW type examination certificate

## DVGW-Baumusterprüfzertifikat


**DW-7801BP0330**

Registration Number  
Registriernummer

<b>Field of Application</b> <i>Anwendungsbereich</i>	products of water supply <i>Produkte der Wasserversorgung</i>
<b>Distributor</b> <i>Vertreiber</i>	ELECTROSTEEL EUROPE SA Z.I. Nord, 9, rue Galilée, F-13200 Arles
<b>Product Category</b> <i>Produktart</i>	cast iron and steel pipes for water pipelines: Ductile iron pipes (7801)
<b>Product Description</b> <i>Produktbezeichnung</i>	ductile iron pipes for the drinking water supply
<b>Model</b> <i>Modell</i>	Gusseisenrohr "ELECTROSTEEL"
<b>Test Reports</b> <i>Prüfberichte</i>	mechanical test: 11 7415 12-01 from 12.02.2013 (MPG) mechanical test: 11 7415 11 from 12.02.2012 (MPG) KTW testing: K-172236-09-Ko/sf from 13.01.2009 (WHY) hygienic testing: W-175293-09-SI from 06.04.2009 (WHY) KTW testing: KA 361/08 from 04.11.2008 (TZW)
<b>Test Basis</b> <i>Prüfgrundlagen</i>	DVGW GW 337-P (01.09.2010) DIN EN 545 (01.09.2011) DVGW W 347 (01.04.2006) DVGW W 348 (01.09.2004) BGA KTW (12.12.1985) DVGW W 270 (01.11.2007)
<b>Date of Expiry / File No.</b> <i>Ablaufdatum / Aktenzeichen</i>	27.06.2018 / 13-0317-WNV

ZV 05/04/10 DE

21.06.2013/G/B-1/2

Date, Issued by:  Head of Certification Body  
Datum, Bearbeiter, Blatt, Leiter der Zertifizierungsstelle

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info@dvgw-cert.com

<b>Type</b> <i>Typ</i>	<b>Technical Data</b> <i>Technische Daten</i>	<b>Remarks</b> <i>Bemerkungen</i>
Gusseisenrohr "ELECTROSTEEL"	manufacturing group: DN 80 up to DN 1100	

<b>Type Variation</b> <i>Ausführungsvariante</i>	<b>Explanations</b> <i>Erläuterungen</i>
Push-On Joint	push-in-socket connection, DN 80 up to DN 1100
Restrained Joint	push-in-socket connection, DN 80 up to DN 1100
Flansch, aufgeschraubt	flange connection, DN 80 up to DN 600 (PN 10, PN 16, PN 25, PN 40); DN 700 up to DN 1000 (PN 10, PN 16, PN 25)
Flansch, angeschweißt	flange connection, DN 80 up to DN 600 (PN 10, PN 16, PN 25, PN 40); DN 700 up to DN 1000 (PN 10, PN 16, PN 25)

#### **Hints of Utilization / Remarks**

##### ***Verwendungshinweise / Bemerkungen***

lining: cement mortar according to DIN EN 545

coatings: zinc coating with overlay according to DIN EN 545; zinc-aluminum coating with overlay according to DIN EN 545

DVGW





**CERT**

# DVGW-Baumusterprüfzertifikat

## DVGW type examination certificate

**DW-7801BP0330**

Registriernummer  
registration number

<b>Anwendungsbereich</b> <i>field of application</i>	Produkte der Wasserversorgung <i>products of water supply</i>
<b>Vertreiber</b> <i>distributor</i>	ELECTROSTEEL EUROPE SA Z.I. Nord, 9, rue Galilée, F-13200 Arles
<b>Produktart</b> <i>product category</i>	Guss- und Stahlrohre für Trinkwasserversorgung: Rohre aus duktilem Gusseisen (7801)
<b>Produktbezeichnung</b> <i>product description</i>	Rohre aus duktilem Gusseisen für die Trinkwasserversorgung
<b>Modell</b> <i>model</i>	Gusseisenrohr "ELECTROSTEEL"
<b>Prüfberichte</b> <i>test reports</i>	Mechanikprüfung: 11 7415 12-01 vom 12.02.2013 (MPG) Mechanikprüfung: 11 7415 11 vom 12.02.2012 (MPG) KTW-Prüfung: K-172236-09-Ko/sf vom 13.01.2009 (WHY) Mikrobiologische Prüfung: W-175293-09-SI vom 06.04.2009 (WHY) KTW-Prüfung: KA 361/08 vom 04.11.2008 (TZW)
<b>Prüfgrundlagen</b> <i>test basis</i>	DVGW GW 337-P (01.09.2010) DIN EN 545 (01.09.2011) DVGW W 347 (01.04.2006) DVGW W 348 (01.09.2004) BGA KTW (12.12.1985) DVGW W 270 (01.11.2007)
<b>Ablaufdatum / AZ</b> <i>date of expiry / file no.</i>	27.06.2018 / 13-0317-WNV

7602/14-1 DE

21.06.2013 GI B-1/2

Datum, Bearbeiter, Blatt, Leiter der Zertifizierungsstelle  
date, issued by, sheet, head of certification body

DVGW CERT GmbH ist von der DAkkS nach DIN EN 45011:1998 akkreditierte Stelle für die Zertifizierung von Produkten der Energie- und Wasserversorgung.

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<b>Typ</b> <i>type</i>	<b>Technische Daten</b> <i>technical data</i>	<b>Bemerkungen</b> <i>remarks</i>
Gusseisenrohr "ELECTROSTEEL"	Fertigungsgruppe: DN 80 bis DN 1100	

<b>Ausführungsvariante</b> <i>type variation</i>	<b>Erläuterungen</b> <i>explanations</i>
Push-On Joint	Steckmuffenverbindung, DN 80 bis DN 1100
Restrained Joint	Steckmuffenverbindung, DN 80 bis DN 1100
Flansch, aufgeschraubt	Flanschverbindung, DN 80 bis DN 600 (PN 10, PN 16, PN 25, PN 40); DN 700 bis DN 1000 (PN 10, PN 16, PN 25)
Flansch, angeschweißt	Flanschverbindung, DN 80 bis DN 600 (PN 10, PN 16, PN 25, PN 40); DN 700 bis DN 1000 (PN 10, PN 16, PN 25)

### **Verwendungshinweise / Bemerkungen**

#### *hints of utilization / remarks*

Auskleidung: Zementmörtelauskleidung nach DIN EN 545

Beschichtungen und Umhüllungen: Zinküberzug mit Deckschicht nach DIN EN 545; Zink-Aluminiumüberzug mit Deckschicht nach DIN EN 545



Laboratoire Agréé pour les analyses d'eaux par le Ministère de la Santé  
 Laboratoire habilité par le Ministère chargé de la santé en application de l'article R\*.1321-52 du code de la santé publique

**CERTIFICAT DE CONFORMITE**  
**AUX LISTES POSITIVES DE REFERENCE**  
*Certificate of conformity to positive lists*

Conformément à l'arrêté du 29 mai 1997 modifié, aux circulaires du Ministère chargé de la santé  
 DGS/VS4 n° 99/217 du 12 avril 1999 et DGS/VS4 n° 2000/232 du 27 avril 2000  
 et à l'avis paru au Journal Officiel du 24 février 2012 (texte n°119)

<p><b>Coordonnées du demandeur :</b>  <i>Contact details of the ACS owner</i></p> <p><b>KUHBIER LUBRICATION + PACKAGING</b>  <b>GmbH &amp; CO. KG</b>  <b>Kölner Strasse 77-79</b>  <b>58566 KIERSPE</b>  <b>Allemagne</b></p>	<p><b>Nom(s) commercial(aux) du produit fini :</b>  <i>Commercial name(s) of the finished product</i></p> <p><b>NEUTREX T (F)</b></p>
--	---

**Type de produit fini / Type of finished product :**

<input checked="" type="checkbox"/> Lubrifiant / Lubricant	<input type="checkbox"/> Ajout ou Adjuvant organique pour ciment / Organic cement admixture
<input type="checkbox"/> Graisse / Grease	<input type="checkbox"/> Revêtement à base de ciment / Cementitious coating
<input type="checkbox"/> Colle / Glue	<input type="checkbox"/> Joint de diamètre inférieur à 63 mm / Seal, gasket, o-ring with a diameter lower than 63 mm
<input type="checkbox"/> Autre / Other	

**Commentaires / Comments :** /  
 Couleur du produit / Product color : /

**N° de dossier attribué par le laboratoire habilité / File reference :** **15 CLP LY 032**

**Formulation chimique / Chemical formulation :**

La formulation chimique vérifiée par le laboratoire est conforme aux listes positives de référence. Ce certificat est établi sous réserve de la non-modification de la composition chimique du produit et des préparations commerciales qui le constituent. Il peut par ailleurs être remis en cause par l'évolution des listes positives.

*The chemical formulation checked by the laboratory is conform to the positive lists. This certificate is issued provided that chemical composition of the product ( and commercial preparations that constitute it) stays unmodified. It can also be reconsidered by the positive lists evolution.*

**Remarque / Remark :** /

**Attestation délivrée par / Certificate issued by :** Christelle AUTUGELLE      Signature :  
 Responsable MCDE  
 CARSO - L.S.E.H.L.

A la date du / Date of issue : 02 Novembre 2015  
 Date d'expiration du CLP / Expiry date : 02 Novembre 2020

**Commentaires / comments :** /



# CARSO - LABORATOIRE SANTÉ ENVIRONNEMENT HYGIÈNE DE LYON

Laboratoire Agréé pour les analyses d'eaux par le Ministère de la Santé

## CERTIFICAT DE CONFORMITE AUX LISTES POSITIVES DE REFERENCE

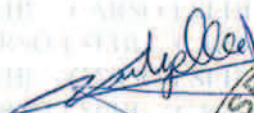
Conformément à l'arrêté du 29 mai 1997 modifié et aux circulaires du Ministère de la santé  
DGS/VS4 n° 99/217 du 12 avril 1999 et DGS/VS4 n° 2000/232 du 27 avril 2000  
et à l'avis paru au Journal Officiel du 24 Février 2012 (texte n°119)

<b>Coordonnées du demandeur :</b>  <b>ELECTROSTEEL EUROPE S.A.</b> <b>Z.I. Nord</b> <b>9, rue Galilée</b> <b>13200 ARLES</b>	<b>Nom(s) commercial(aux) du produit fini :</b>  <b>Mortier de ciment BIRLA</b>
---	---

<b>Type de produit fini :</b>  <input type="checkbox"/> lubrifiant <input type="checkbox"/> graisse <input type="checkbox"/> ajout ou adjuvant organique pour ciment <input type="checkbox"/> joint de diamètre inférieur à 63mm <input type="checkbox"/> colle <input checked="" type="checkbox"/> revêtement à base de ciment <input type="checkbox"/> autre :
<b>Commentaires : /</b>
<b>N° de dossier attribué par le laboratoire habilité :</b> <b>12 CLP LY 028</b>

<b>Formulation chimique :</b>  La formulation chimique vérifiée par le laboratoire est conforme aux listes positives de référence. Ce certificat est établi sous réserve de la non-modification de la composition du produit et des préparations commerciales qui le constituent. Il peut par ailleurs être remis en cause par l'évolution des listes positives.
--

<b>Remarque : /</b>
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<b>Certificat de CLP délivré par :</b>  Christelle AUTUGELLE Responsable Laboratoire MCDE CARSO - L.S.E.H.L.	<b>Signature :</b> 
A la date du : 05 Septembre 2012	
Date d'expiration du certificat de CLP : 05 Septembre 2017	

F\_MC130-b 11.04.2012 CAu





ATTESTATION DE CONFORMITE SANITAIRE (ACS)

Certificate of sanitary conformity

Conformément à l'arrêté du 29 mai 1997 modifié et aux circulaires du Ministère de la santé

DGS/VS4 n° 99/217 du 12 avril 1999 et DGS/VS4 n° 2000/232 du 27 avril 2000

Table with 2 columns: Coordonnées du demandeur / Contact details of the ACS owner and Nom(s) commercial(aux) du produit fini / Commercial name(s) of the finished product. Includes details for WALTER MÄDER AQUALACK GmbH and INERTOL BS 10 FR.

Type de produit fini / Type of finished product section with checkboxes for various materials like PVC, PE, PP, etc. and Nature du matériau / Type of material section with checkboxes for PVC, PA, PTFE, ABS, etc.

Commentaires / Comments : Renouvellement / renewal ACS 08 MAT LY 096. Couleur du matériau / material color : noire / black

N° de dossier attribué par le laboratoire habilité / File reference : 14 MAT LY 222

Formulation chimique / Chemical formulation : Vérifiée par le laboratoire et conforme aux listes positives. Checked by the laboratory and conform to the positive lists

Essais d'inertie réalisés selon la norme XP P 41-250 / Migration tests performed according to the standard XP P 41-250 : Rapport S/V testé / S/V tested ratio : 3 cm²/L. Commentaires : La composition chimique de l'Inertol BS 10 FR n'ayant pas évolué et étant toujours conforme aux listes positives, de nouveaux essais d'inertie ne sont pas nécessaires.

Attestation délivrée par / Certificate issued by : Christelle AUTUGELLE, Responsable MCDE, CARSO - L.S.E.H.L. A la date du / Date of issue : 08 Décembre 2014. Date d'expiration de l'ACS / Expiry date : 08 Décembre 2019. Commentaires : Second renouvellement de l'ACS 05 MAT LY 063 après avis de l'AFSSA en date du 02.11.2009 (saisine n° 2009-SA-0136).



**ATTESTATION DE CONFORMITE SANITAIRE**

Conformément à l'arrêté du 29 mai 1997 modifié et aux circulaires du Ministère de la Santé  
DGS/VS4 n° 99/217 du 12 avril 1999 et DGS/VS4 n° 2000/232 du 27 avril 2000

<b>Coordonnées du demandeur :</b>  <b>ELECTROSTEEL Casting Limited</b> <b>30, B.T. Road, Khardah</b> <b>P.O. Sukchar</b> <b>KOLKATA 700115</b> <b>INDE</b>	<b>Nom(s) commercial(aux) du produit fini :</b>  <b>ELECTROCOAT EP 812</b>
--	--

**Type de produit fini :**

<input type="checkbox"/> tube	<input type="checkbox"/> raccord et manchon	<input checked="" type="checkbox"/> revêtement
<input type="checkbox"/> produit de jointoyage	<input type="checkbox"/> joint	<input type="checkbox"/> composant d'accessoires
<input type="checkbox"/> autre :		

**Nature du matériau :**

<input type="checkbox"/> polychlorure de vinyl PVC	<input type="checkbox"/> polybutylène PB	<input type="checkbox"/> ethylene-propylène EPDM
<input type="checkbox"/> PVC surchloré PVC-C	<input type="checkbox"/> polyamide PA	<input type="checkbox"/> butadiène-acrylonitrile NBR
<input type="checkbox"/> polyéthylène PE	<input type="checkbox"/> polytétrafluoroéthylène PTFE	<input type="checkbox"/> autre :
<input type="checkbox"/> polyéthylène réticulé PER	<input type="checkbox"/> acrylonitrile-butadiène-styrène ABS	
<input type="checkbox"/> polypropylène PP	<input checked="" type="checkbox"/> à base de résine époxydique	

**Commentaires :** /


**N° de dossier attribué par le laboratoire habilité :** **13 MAT LY 151**

**Formulation chimique :**

La formulation chimique a été vérifiée conforme aux listes positives. Les restrictions sont vérifiées.

**Essais d'inertie réalisés selon la norme XP P 41-250 :**

Rapport S/V testé : 3 cm<sup>2</sup>/L  
Date des essais : du 14 Octobre 2013 au 07 Janvier 2014  
Commentaires : Les essais d'inertie réalisés selon la circulaire DGS/VS4 n° 2000/232 du 27 avril 2000 sur des échantillons de 3 cm<sup>2</sup> n'ont fait apparaître aucune anomalie. Les résultats sont conformes aux exigences de la circulaire DGS/VS4 n° 99-217 du 12 Avril 1999.

**Attestation délivrée par :** Christelle AUTUGELLE      Signature :   
Responsable Laboratoire MCDE  
CARSO - L.S.E.H.L.)  
A la date du : 08 Janvier 2014  
Date d'expiration de l'ACS : 08 Janvier 2019  
Commentaires : /



## ATTESTATION DE CONFORMITE SANITAIRE (ACS)

### Certificate of sanitary conformity

Conformément à l'arrêté du 29 mai 1997 modifié et aux circulaires du Ministère de la Santé  
DGS/VS4 n° 99/217 du 12 avril 1999 et DGS/VS4 n° 2000/232 du 27 avril 2000

**Coordonnées du demandeur /  
Contact details of the ACS owner :**

Andhra Polymers Private Limited  
Plot No-2, Phase-V  
IDA Jeedimetla  
500055 Hyderabad  
India

**Nom(s) commercial(aux) du produit fini /  
Commercial name(s) of the finished product :**

EWA 8250 (EW 48)  
EPDM Gasket for the sealing of pipe Joints

**Type de produit fini / Type of finished product :**

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> tube / pipe                                | <input checked="" type="checkbox"/> joint / seal, gasket, o-ring... | <input type="checkbox"/> revêtement / coating                                |
| <input type="checkbox"/> produit de jointoyage /<br>sealing product | <input type="checkbox"/> raccord et manchon / fittings              | <input type="checkbox"/> composant d'accessoires /<br>accessories components |
| <input type="checkbox"/> autre / other :                            |   |  |

**Nature du matériau / Type of material :**

- |  |  |   |
|--|--|---|
| <input type="checkbox"/> polychlorure de vinyl PVC | <input type="checkbox"/> polybutylène PB                           | <input checked="" type="checkbox"/> éthylène-propylène EPDM |
| <input type="checkbox"/> PVC surchloré PVC-C       | <input type="checkbox"/> polyamide PA                              | <input type="checkbox"/> butadiène-acrylonitrile NBR        |
| <input type="checkbox"/> polyéthylène PE           | <input type="checkbox"/> polytétrafluoroéthylène PTFE              | <input type="checkbox"/> autre / other :                    |
| <input type="checkbox"/> polyéthylène réticulé PEX | <input type="checkbox"/> acrylonitrile-butadiène-styrène ABS       |   |
| <input type="checkbox"/> polypropylène PP          | <input type="checkbox"/> à base de résine époxydique / epoxy resin |   |

**Commentaires / Comments :**

Couleur du matériau / Material color : Noir / Black

**N° de dossier attribué par le laboratoire habilité / File reference : 15 MAT NY 086**

**Formulation chimique / Chemical formulation :**

Vérfiée par le laboratoire et conforme aux listes positives /  
Checked by the laboratory and conform to the positive lists

**Essais d'inertie réalisés selon la norme XP P 41-250 /**

**Migration tests performed according to the standard XP P 41-250 :**

Rapport S/V testé / S/V tested ratio : 3 cm<sup>2</sup>/L

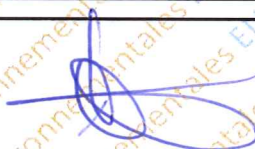
Date des essais / Tests date : Aucun essai n'est nécessaire au renouvellement de cette ACS / No testing is required to issue this ACS.

Commentaires : /

**Attestation délivrée par / Certificate issued by :**

Julie MARCO  
Chef de Service / Department Manager

Signature :



A la date du / Date of issue : 25 juin 2015

Date d'expiration de l'ACS / Expiry date : 10 février 2020

Commentaires / Comments : Renouvellement de l'ACS 10 MAT LI 002 / Renewal of ACS 10 MAT LI 002

Eurofins Expertises Environnementales

SAS au capital de 71676 € RCS Nancy 751 056 102 TVA FR 35 751 056 102

Siège social : Rue Lucien Cuenot site Saint Jacques II BP 51005 54521 MAXEVILLE cedex - T. 03 83 50 36 17 F 03 83 50 23 70



Our Ref: HL/M1301059  
Test Report: MA4737/G

20<sup>th</sup> May 2013

Electrosteel Castings Ltd.  
30, B.T. Road,  
PO-Sukhchar,  
District – 24 Parganas (N),  
West Bengal,  
Pin – 700115,  
India



**WATER REGULATIONS ADVISORY SCHEME (WRAS)**  
**MATERIAL APPROVAL**

The material referred to in this letter is suitable for contact with wholesome water for domestic purposes having met the requirements of BS 6920-1:2000 'Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water'.

The reference relates solely to its effect on the quality of the water with which it may come into contact and does not signify the approval of its mechanical or physical properties for any use.

**FACTORY APPLIED PIPE & FITTING COATINGS**

**5030**

Electrocoat EP812. Factory applied, two component, blue coloured epoxy paint. Mix and apply as per manufacturer's instructions. Cure for 60 minutes at 50°C – 60°C followed by 7 days at an ambient temperature. For use with water up to 23°C.

This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.

**APPROVAL NUMBER: 1305512**  
**APPROVAL HOLDER: ELECTROSTEEL CASTINGS LTD.**

The Scheme reserves the right to review approval. This approval is valid between May 2013 and May 2018.

An entry, as above, will accordingly be included in the Water Fittings Directory on-line under the section headed, "Materials which have passed full tests of effect on water quality".

The Directory may be found at: [www.wras.co.uk/directory](http://www.wras.co.uk/directory)

Yours faithfully

A handwritten signature in blue ink, appearing to read 'Jason Furnival', is written over a light blue horizontal line.

Jason Furnival  
Approvals & Enquiries Manager  
Water Regulations Advisory Scheme

**WRAS MATERIAL APPROVAL - MATERIALS WHICH HAVE PASSED FULL TESTS OF EFFECT ON WATER  
QUALITY**

The material referred to in this letter is suitable for contact with water for domestic purposes. **Approval of this material does not signify the approval of its mechanical or physical properties for any use.**

Manufacturers or applicants may only quote in their sales literature terms which are used in this letter, namely that; 'the material as listed, having passed the tests of effect on water quality, is suitable for use in contact with wholesome water'

This may be abbreviated to 'Water Regulations Advisory Scheme - Approved Material' or 'WRAS Approved Material'.

The scope of an Approval does not extend to rebranded materials unless otherwise agreed by the Scheme.

**Use of the WRAS Approved Material Logo**

The WRAS Approved Material logo is registered under the Trade Marks Acts 1994

Approval holders may use the WRAS Approved Material logo and make reference to any approval issued by WRAS Ltd. in respect of a particular material or range of materials provided the approval is, and remains valid.

Approval holders are entitled to use the logo on the packing, promotional literature and point of sale advertising Approved Materials.

**Modifications to existing Approvals**

It is a condition of WRAS Material Approval that **NO** changes or modifications to the Approved Material, be made without the Approval Holder first notifying WRAS Ltd. Full details of the proposed changes must be provided to the Scheme. Failure to comply with this condition will immediately invalidate a previously granted Approval.

**Re-Approval**

WRAS will write to you 1 year before the approval expires asking whether you would like to renew it. Please complete the relevant section of the MA3 application form which will be included with the letter and return to WRAS (via e-mail or post).

Please note it is the responsibility of the Approval Holder to ensure the Approval remains valid. WRAS Ltd. accepts no liability for the delay in granting approval where this is caused by circumstances outside of the Scheme's control.



Our Ref: HL/M1401041  
Test Report: MA4987/W

2<sup>nd</sup> June 2014

Electrosteel Castings Ltd. 30, B.T. Road,  
PO-Sukhchar,  
District-24 Parganas (N),  
West Bengal,  
PIN-700115,  
India



**WATER REGULATIONS ADVISORY SCHEME (WRAS)**  
**MATERIAL APPROVAL**

The material referred to in this letter is suitable for contact with wholesome water for domestic purposes having met the requirements of BS 6920-1:2000 'Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water'.

The reference relates solely to its effect on the quality of the water with which it may come into contact and does not signify the approval of its mechanical or physical properties for any use.

**FACTORY APPLIED COATINGS, PAINTS & LININGS**

**5030**

Electrocement type CEM III A. Factory applied, grey coloured slag cement mortar, intended to line ductile iron pipes and fittings. Mix cement, sand and water in a mass ratio of 0.6:1.0:0.22. Cure for 28 days at 20°C – 22°C. For use with water up to 50°C.

This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.

**APPROVAL NUMBER: 1408506**

**APPROVAL HOLDER: ELECTROSTEEL CASTINGS LTD.**

This is a re-approval of 0907514 which is valid between July 2009 and July 2014.

The Scheme reserves the right to review approval.

Approval 1408506 is valid between August 2014 and August 2019.

An entry, as above, will accordingly be included in the Water Fittings Directory on-line under the section headed, "Materials which have passed full tests of effect on water quality".

The Directory may be found at: [www.wras.co.uk/directory](http://www.wras.co.uk/directory)

Yours faithfully

A handwritten signature in black ink, appearing to read 'Jason Furnival', is written over a horizontal line.

Jason Furnival  
Approvals & Enquiries Manager  
Water Regulations Advisory Scheme

## **WRAS MATERIAL APPROVAL - MATERIALS WHICH HAVE PASSED FULL TESTS OF EFFECT ON WATER QUALITY**

The material referred to in this letter is suitable for contact with water for domestic purposes. **Approval of this material does not signify the approval of its mechanical or physical properties for any use.**

Manufacturers or applicants may only quote in their sales literature terms which are used in this letter, namely that; 'the material as listed, having passed the tests of effect on water quality, is suitable for use in contact with wholesome water'

This may be abbreviated to 'Water Regulations Advisory Scheme - Approved Material' or 'WRAS Approved Material'.

The scope of an Approval does not extend to rebranded materials unless otherwise agreed by the Scheme.

### **Use of the WRAS Approved Material Logo**

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Approval holders may use the WRAS Approved Material logo and make reference to any approval issued by WRAS Ltd. in respect of a particular material or range of materials provided the approval is, and remains valid.

Approval holders are entitled to use the logo on the packing, promotional literature and point of sale advertising Approved Materials.

### **Modifications to existing Approvals**

It is a condition of WRAS Material Approval that **NO** changes or modifications to the Approved Material, be made without the Approval Holder first notifying WRAS Ltd. Full details of the proposed changes must be provided to the Scheme. Failure to comply with this condition will immediately invalidate a previously granted Approval.

### **Re-Approval**

WRAS will write to you 1 year before the approval expires asking whether you would like to renew it. Please complete the relevant section of the MA3 application form which will be included with the letter and return to WRAS (via e-mail or post).

Please note it is the responsibility of the Approval Holder to ensure the Approval remains valid. WRAS Ltd. accepts no liability for the delay in granting approval where this is caused by circumstances outside of the Scheme's control.

Approval Number: 1508508  
Test Report: M105996



Water Regulations Advisory Scheme Ltd.  
Unit 13,  
Willow Road,  
Pen y Fan Industrial Estate,  
Crumlin,  
Gwent,  
NP11 4EG

12<sup>th</sup> June 2015

Mader Aqualack AG  
Buschgrundstrasse 10-12,  
45894 Gelsenkirchen,  
Germany

**WATER REGULATIONS ADVISORY SCHEME LTD. (WRAS)**  
**MATERIAL APPROVAL**

The material referred to in this letter is suitable for contact with wholesome water for domestic purposes having met the requirements of BS6920-1:2000 and/or 2014 'Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water'.

The reference relates solely to its effect on the quality of the water with which it may come into contact and does not signify the approval of its mechanical or physical properties for any use.

**COATINGS, PAINTS & LININGS - FACTORY APPLIED PIPE & FITTINGS COATINGS.**

**5030**

Inertol BS 10 FR. Factory applied, black coloured bitumen coating. Apply as per manufacturer's technical data sheet no. 786.3 dated February 2013-V2. Cure for 30 minutes@90-100°C. For use with water up to 23°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval. Materials listed in this section are not approved for use for contact with water that is required to be wholesome on large water retaining structures such as lining of pipes, cisterns or water storage tanks.

**APPROVAL NUMBER: 1508508**

**APPROVAL HOLDER: MADER AQUALACK AG**

The Scheme reserves the right to review approval.  
Approval 1508508 is valid between August 2015 and August 2020

An entry, as above, will accordingly be included in the Water Fittings Directory on-line under the section headed, "Materials which have passed full tests of effect on water quality".

The Directory may be found at: [www.wras.co.uk/directory](http://www.wras.co.uk/directory)

Yours faithfully

A handwritten signature in black ink, appearing to read 'Jason Furnival', written in a cursive style.

Jason Furnival  
Approvals & Enquiries Manager  
Water Regulations Advisory Scheme



Our Ref: NJ/M1304118  
Test Report: MA4666/M

25<sup>th</sup> March 2013

Andhra Polymers Pvt. Ltd  
Plot No 2, Phase V  
IDA Jeedimetla  
Hyderabad  
500 055  
Andhrapradesh  
India

**WATER REGULATIONS ADVISORY SCHEME (WRAS)**  
**MATERIAL APPROVAL**

The material referred to in this letter is suitable for contact with wholesome water for domestic purposes having met the requirements of BS 6920-1:2000 'Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water'.

The reference relates solely to its effect on the quality of the water with which it may come into contact and does not signify the approval of its mechanical or physical properties for any use.

**RUBBERS - ETHYLENE PROPYLENE DIENE MONOMER (EPDM) - MATERIAL ONLY**

**5365**

EWA12150 (Shore hardness 50A), EWA12155 (Shore hardness 55A), EWA12160 (Shore hardness 60A), EWA12165 (Shore hardness 65A), EWA12170 (Shore hardness 70A) & EWA12180 (Shore hardness 80A). Black coloured, compression moulded, EPDM Rubber sheet material. Test in-radius size 0.94mm. For use with water up to 23°C.

**APPROVAL NUMBER: 1301552**

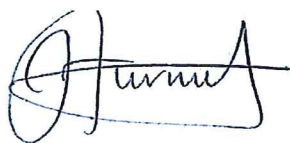
**APPROVAL HOLDER: ANDHRA POLYMERS PVT. LTD**

The Scheme reserves the right to review approval. This approval is valid between January 2013 and January 2018.

An entry, as above, will accordingly be included in the Water Fittings Directory on-line under the section headed, "Materials which have passed full tests of effect on water quality".

The Directory may be found at: [www.wras.co.uk/directory](http://www.wras.co.uk/directory)

Yours faithfully



Jason Furnival  
Approvals & Enquiries Manager  
Water Regulations Advisory Scheme

## **WRAS MATERIAL APPROVAL - MATERIALS WHICH HAVE PASSED FULL TESTS OF EFFECT ON WATER QUALITY**

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### **Re-Approval**

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Our Ref: NJ/M1301072  
Test Report: MAT/LAB 160G

31<sup>st</sup> May 2013

Kuhbier Lubrication+Packaging GmbH & Co. KG  
Kölner Str. 77 – 79  
58566 Kierspe  
Germany

**WATER REGULATIONS ADVISORY SCHEME (WRAS)**  
**MATERIAL APPROVAL**

The material referred to in this letter is suitable for contact with wholesome water for domestic purposes having met the requirements of BS 6920-1:2000 'Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water'.

The reference relates solely to its effect on the quality of the water with which it may come into contact and does not signify the approval of its mechanical or physical properties for any use.

**LUBRICANTS**

**5160**

NEUTREX T. Grey coloured lubricant. For use with water up to 23°C.

**APPROVAL NUMBER: 1305522**

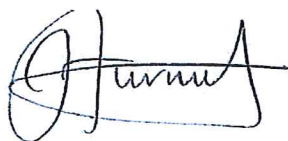
**APPROVAL HOLDER: KUHBIER LUBRICATION+PACKAGING GMBH & CO. KG**

The Scheme reserves the right to review approval. This approval is valid between May 2013 and May 2018.

An entry, as above, will accordingly be included in the Water Fittings Directory on-line under the section headed, "Materials which have passed full tests of effect on water quality".

The Directory may be found at: [www.wras.co.uk/directory](http://www.wras.co.uk/directory)

Yours faithfully



Jason Furnival  
Approvals & Enquiries Manager  
Water Regulations Advisory Scheme



## **WRAS MATERIAL APPROVAL - MATERIALS WHICH HAVE PASSED FULL TESTS OF EFFECT ON WATER QUALITY**

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### **Re-Approval**

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Please note it is the responsibility of the Approval Holder to ensure the Approval remains valid. WRAS Ltd. accepts no liability for the delay in granting approval where this is caused by circumstances outside of the Scheme's control.

Our Ref: HL/M110326  
Test Report: M105057A & B

13<sup>th</sup> October 2011

Mader Aqualack AG.  
Buschgrundstr. 10 – 12,  
45894 Gelsenkirchen,  
Germany

**WATER REGULATIONS ADVISORY SCHEME (WRAS)**  
**MATERIAL APPROVAL**

The material referred to in this letter is suitable for contact with wholesome water for domestic purposes having met the requirements of BS 6920-1:2000 'Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water'.

The reference relates solely to its effect on the quality of the water with which it may come into contact and does not signify the approval of its mechanical or physical properties for any use.

**BITUMINOUS BASED PRODUCTS**

**5021**

Inertol BS10. Factory applied, black coloured bitumen coating. Apply as per manufacturer's instructions. Cure for 30 minutes at 50-60°C or 5 hours at 23°C. For use with water up to 60°C.

Petroleum or asphaltic bitumen, NOT coal tar bitumen. Materials listed in this section are not approved for use for contact with water that is required to be wholesome on large water retaining structures such as lining of pipes, cisterns or water storage tanks.

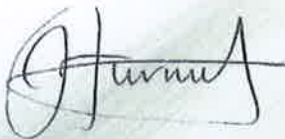
**APPROVAL NUMBER: 1109530**  
**APPROVAL HOLDER: MADER AQUALACK AG.**

The Scheme reserves the right to review approval. This approval is valid between September 2011 and September 2016.

An entry, as above, will accordingly be included in the Water Fittings Directory on-line under the section headed, "Materials which have passed full tests of effect on water quality".

The Directory may be found at: [www.wras.co.uk/directory](http://www.wras.co.uk/directory)

Yours faithfully



**Jason Furnival**  
**Approvals & Enquiries Manager**  
**Water Regulations Advisory Scheme**

# Hygiene-Institut des Ruhrgebiets

Institut für Umwelthygiene und Toxikologie  
Direktor: Prof. Dr. rer. nat. L. Dunemann



HYGIENE-INSTITUT · Postfach 10 12 55 · 45812 Gelsenkirchen

Mäder Aqualack AG  
Werk Gelsenkirchen  
Buschgrundstr. 10-12  
45894 Gelsenkirchen

Besucher-/Paketanschrift:  
Rotthauer Str. 21  
45879 Gelsenkirchen

Zentrale (0209) 9242-0  
Durchwahl (0209) 9242-270  
Telefax (0209) 9242-212  
E-Mail k.stefanski@hyg.de  
Internet www.hyg.de

Unser Zeichen: **K-227441-13-Sf/sf**  
Ansprechpartner: Karin Stefanski

Gelsenkirchen, 14.03.2013

## PRÜFZEUGNIS

gemäß DVGW Arbeitsblatt W 348  
(Stand: Sept. 2004)

**Erzeugnis:** Inertol BS 10

**Prüfkörper:** beschichtete Prüfplatten (schwarz)

### Prüfergebnis:

Die Prüfplatten, beschichtet mit **Inertol BS 10** erfüllen gemäß Prüfbericht-Nr.: **K-227441-13-Sf/sf vom 14.03.2013** die Anforderungen an "Bitumenbeschichtungen von Formstücken aus duktilem Gusseisen und im Verbindungsbereich von Rohren aus duktilem Gusseisen, unlegiertem und niedrig legierten Stahl".

Die Gültigkeit dieses Prüfzeugnisses beginnt mit dem Ausstellungsdatum, endet bei unveränderten Voraussetzungen am **14.03.2018** und kann auf Antrag einmalig um weitere 5 Jahre verlängert werden.

**Dieses Prüfzeugnis ist nur in Verbindung mit einer bestandenen Prüfung gemäß DVGW-Arbeitsblatt W 270 gültig.**

Der Direktor des Hygiene-Instituts  
i.A.

Dr. rer. nat. Andreas Koch  
Leiter der Abteilung für wasser-  
hygienische Materialprüfungen



Die Begutachtung erfolgte unter der Voraussetzung, dass die zur Herstellung des Produktes verwendeten Ausgangsstoffe bzw. deren Zusammensetzung lückenlos bekannt gegeben wurden und keine weiteren Stoffe in dem Produkt enthalten sind. Die Gültigkeit dieses Dokuments erlischt bei Veränderungen in der Zusammensetzung des Werkstoffs oder an den Verarbeitungsbedingungen.

Die Ergebnisse unserer Prüfungen und die Bewertungen gelten für die untersuchten Prüfgegenstände und die zum Zeitpunkt der Prüfung geltenden gesetzlichen Regelungen. Dieses Dokument darf ohne unsere ausdrückliche schriftliche Genehmigung nur in vollständiger und unveränderter Form veröffentlicht oder vervielfältigt werden.



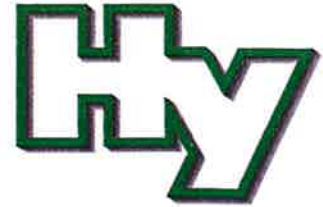


# Hygiene-Institut des Ruhrgebiets

Institut für Umwelthygiene und Toxikologie

Direktor: Prof. Dr. rer. nat. L. Dunemann

Träger: Verein zur Bekämpfung der Volkskrankheiten im Ruhrkohlengebiet e.V.



Hygiene-Institut · Postfach 10 12 55 · 45812 Gelsenkirchen

Walter Mäder Aqualack AG  
-Niederlassung Gelsenkirchen-  
Buschgrundstraße 10 – 12  
45894 Gelsenkirchen

Besucher-/Paketanschrift:  
Rotthauer Str. 21, 45879 Gelsenkirchen

Zentrale (0209) 9242-0  
Durchwahl (0209) 9242-230  
Telefax (0209) 9242-222  
E-Mail c.schell@hyg.de  
Internet www.hyg.de

Unser Zeichen: W-229729-13-SI  
Sachbearbeiterin: Dr. Ch. Schell

Gelsenkirchen, den 13.05.2013

## PRÜFZEUGNIS

### Vermehrung von Mikroorganismen auf Werkstoffen für den Trinkwasserbereich Prüfung gemäß DVGW Technische Regeln, Arbeitsblatt W 270, November 2007

**Antragsteller:** Walter Mäder Aqualack AG  
-Niederlassung Gelsenkirchen-  
Buschgrundstraße 10 – 12  
45894 Gelsenkirchen

**Werkstoff:** Inertol BS 10

**Prüfungsart:** Werkstoffprüfung

Der Werkstoff **Inertol BS 10** erfüllt gemäß Prüfbericht **W-229729-13-SI** vom 13.05.2013 die Anforderungen nach DVGW Arbeitsblatt W 270 für den Einsatz im Trinkwasserbereich. Details zum genauen Ablauf der Prüfung sowie die Einzelergebnisse sind dem Prüfbericht zu entnehmen.

Die Gültigkeit dieses Prüfzeugnisses beginnt mit dem Ausstellungsdatum und endet bei unveränderten Voraussetzungen am **13.05.2018**. Die Gültigkeitsdauer beträgt 5 Jahre und kann auf schriftlichen Antrag einmalig um weitere 5 Jahre verlängert werden, sofern die Vorgaben des Arbeitsblattes W 270 erfüllt sind.

Der Direktor des Hygiene-Instituts  
i.A.

  
Dr. Ch. Schell  
Sachgebietsleiterin mikrobiologische Hygiene- und Materialprüfungen  
Abteilung Wasserhygiene und Umweltmikrobiologie

Die Ergebnisse unserer Prüfungen und die Bewertungen gelten für die untersuchten Prüfgegenstände und die zum Zeitpunkt der Prüfung geltenden gesetzlichen Regelungen. Die Gültigkeit des Dokuments erlischt, wenn Veränderungen der Zusammensetzung des Werkstoffs oder der Verarbeitungsbedingungen erfolgen. Dieses Dokument darf ohne unsere ausdrückliche schriftliche Genehmigung nur in vollständiger und unveränderter Form veröffentlicht oder vervielfältigt werden. Dieses Dokument stellt keine DVGW-Zertifizierung dar.



Deutsche  
Akkreditierungsstelle  
D-PL-13042-02-00

Träger des Instituts: Verein zur Bekämpfung der Volkskrankheiten im Ruhrkohlengebiet e.V., Gelsenkirchen, Vereinsregister: VR 519 Amtsgericht Gelsenkirchen  
USt-ID: DE125018356, Vorstand: Prof. Dr. Werner Schlake (Vors.), Prof. Dr. Jürgen Kretschmann, Dr. Emanuel Grün, Volker Vohmann, Prof. Dr. Lothar Dunemann



South Asia

Choose certainty.  
Add value.

# Test Report No. BLR/F(C/M)/15/023191 1/2

## Dated 2016-01-11

**Issued to** : ELECTROSTEEL CASTINGS LIMITED  
30, B T Road,  
Khardah, 24 Parganas ( N ),  
Kolkata, West Bengal,  
India - 700115.

**Attention** : Mr. Sudipta Chatterjee ( Sr. Manager – QAD – KW )

**Customer Ref. No.** : Test Request Form Dated 2015-12-08

**Sample Particulars** :

**Sample Name** : Input Drinking Water for Cement Mortar Preparation

**Sample Description** : Clear Colourless Liquid

**Batch No. & Manufacturing Date** : Not Available

**Sample Package & Quantity** : PET Bottle, 1.0 Liters X 12 Nos + 1.0 Liters X 4 Nos

**Sampled by** : Representative of TÜV SÜD South Asia Pvt Ltd ( Mr. Prasanta Kumar D )

**Sampling Location** : M/s Electrosteel Castings Limited, 30, B T Road, Khardah, 24 Parganas ( N ),Kolkata - 700115, West Bengal, Sampling Date & Time : 08/12/2015 & 4.30 pm

**Sampling Protocol** : Lab\_P\_SOP\_42

**Sample Condition** : Received in Chilled Condition

**Date of Sample Receipt** : Received on 2015-12-16 12:34 pm

**Date of Analysis** : 2015-12-16

**Date of Completion** : 2016-01-08

*Note: The submitted sample is Drawn by the Laboratory*

Authorised by

  
\_\_\_\_\_  
Veena D  
Authorised Signatory

Note: For any technical query, please contact satya.srinivas at satya.srinivas@tuv-sud.in and for any complaint please contact Libin Kumar K.V. at Libinkumar.KV@tuv-sud.in

Note: (1) General Terms & Conditions as mentioned overleaf, (2) The results relate only to the items tested, (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) For details of the accredited scope please contact the laboratory or visit [www.nabl-india.org](http://www.nabl-india.org)

Laboratory:  
TÜV SÜD South Asia Pvt. Ltd.  
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Control No: 15360250.171215.008

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India



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**Test Report No. BLR/F(C/M)/15/023191 1/2**  
**Dated 2016-01-11**

S. No.	Parameters	Results	Specification as per 98 / 83 / EC	Protocol
<b>PART # A</b>				
<b>MICROBIOLOGICAL PARAMETERS</b>				
1	E.coli / 100 ml	Absent	0 / 100 ml	IS : 15185 - 2002 ISO - 9308 - 1
2	Enterococci / 100 ml	Absent	0 / 100 ml	IS : 15186 - 2002 ISO - 7899 - 2 - 2002
3	Pseudomonas aeruginosa / 250 ml	Absent	0 / 250 ml	IS : 13428 - 2005
4	Colony Count @ 22 deg C, cfu / ml	< 1	Max 100 / ml	IS : 5402 - 2012
5	Colony Count @ 37 deg C, cfu / ml	< 1	Max 20 / ml	IS : 5402 - 2012
6	Clostridium perfringens / 100ml	Absent	0/100 ml	Annex 3, 98/83 / EC
7	Coliform Count / 100ml	Absent	0/100ml	IS : 15185 - 2002 ISO - 9308 - 1
<b>PART # B</b>				
<b>CHEMICAL PARAMETERS</b>				
1	Acrylamide, µg/l	Not Detected ( LOQ : 0.01 )	Max 0.100 µg/l	LC - MS / MS
2	Antimony, µg/l	Not Detected ( DL : 1.25 )	Max 5 µg/l	P-3111B, APHA 22 <sup>nd</sup> Edition / Lab_P_SOP_37
3	Arsenic, µg/l	Not Detected ( DL : 1.0 )	Max 10 µg/l	P-3500B, P-3114B, APHA 22 <sup>nd</sup> Edition / Lab_P_SOP_37
4	Benzene, µg/l	Not Detected ( LOQ : 0.01 )	Max 1 µg/l	By GC - MS
5	Benzo ( a ) Pyrene, µg/l	Not Detected ( LOQ : 0.01 )	Max 0.01 µg/l	APHA 22 <sup>nd</sup> Edition
6	Boron, mg / l	BDL ( DL : 50.0 )	Max 1 mg / l	4500 C, APHA 22 <sup>nd</sup> Edition
7	Bromate, mg / l	Not Detected ( DL : 0.01 )	Max 10 µg/l	Lab_P_SOP_146
8	Chromium µg/l	BDL ( DL : 5.0 )	Max 50 µg/l	3120 B, APHA 22 <sup>nd</sup> Edition LAB_P_SOP_37
8	Cadmium, µg/l	BDL ( DL : 0.5 )	Max 5 µg/l	LAB_P_SOP_37
9	Copper, mg / l	Not Detected ( DL : 20.0 )	Max 2 mg / l	P-3111 B, APHA 22 <sup>nd</sup> Edition Edition / LAB_P_SOP_37
10	Cyanide, µg/l	Not Detected ( DL : 50.0 )	Max 50 µg/l	APHA 22 <sup>nd</sup> Edition
11	1, 2 - Dichloroethane, µg/l	Not Detected ( LOQ : 1.0 )	Max 3.0 µg/l	By GC - MS
12	Epichlorohydrin, µg/l	Not Detected ( LOQ : 0.01 )	Max 0.1 µg/l	By GC - MS
13	Fluoride, mg / l	1.0	Max 1.5 mg / l	4500 D, APHA 22 <sup>nd</sup> Edition
14	Lead, µg / L	BDL ( DL : 1.0 )	Max 10 µg/l	P - 3111B, APHA 22 <sup>nd</sup> Edition Edition / LAB_P_SOP_37
15	Mercury, µg/l	BDL ( DL : 0.2 )	Max 1.0 µg/l	P - 3112 B, APHA 22 <sup>nd</sup> Edition Edition / LAB_P_SOP_37

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16	Nickel, µg/l	BDL ( DL : 2.0 )	Max 20 µg / l	P - 3114 B, APHA 22 <sup>nd</sup> Edition / LAB_P_SOP_37
<b>PART # B</b>				
<b>CHEMICAL PARAMETERS</b>				
17	Nitrate, mg / l	< 1.0	Max 50 mg / l	4500 B, APHA 22 <sup>nd</sup> Edition
18	Nitrite, mg / l	< 0.02	Max 0.5 mg / l	4500 B, APHA 22 <sup>nd</sup> Edition
19	<b>Pesticides, µg/l</b>			
A	<b>Organochlorine Group (µg/l) :</b>			
	Aldrin	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Chlordane	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Dieldrin	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Captafol	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Endosulphan ( Alpha )	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Endosulphan ( Beta )	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Endrin	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Heptachlor	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Methoxychlor	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Mirex	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Dicofol	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	O, P - DDT	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	O, P - DDE	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	O, P - DDD	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	P, P - DDT	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	P, P - DDE	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	P, P - DDD	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	2, 4, 5 - T	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	2, 4 - D	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition

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S. No.	Parameters	Results	Specification as per 98 / 83 / EC	Protocol
	Hepta Chloro Epoxide	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
<b>PART # B</b>				
<b>CHEMICAL PARAMETERS</b>				
<b>A</b>	<b>Organochlorine Group :</b>			
	Alpha - HCH	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Beta - HCH	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Gamma - HCH	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Delta - HCH	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Endosulfan Sulfate	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
<b>B</b>	<b>Organophosphate Group :</b>			
	Dimethoate	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Malathion	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Parathion Methyl	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Monocrotophos	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Quinolphos	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Chlorpyrifos	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Phorate	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Phosphamidon	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Dichrotofos	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Phorate Sulfoxide	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Phorate Sulfone	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Methyl Parathion	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Methyl Paraxon	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Malaxon	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Ethion	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
<b>C</b>	<b>Pyrethroids :</b>			
	Deltamethrin	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition

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<b>PART # B</b>				
<b>CHEMICAL PARAMETERS</b>				
<b>C</b>	<b>Pyrethroids :</b>			
	Deltamethrin	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Cypermethrin	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Fenvalerate	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Pyrethrins	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
<b>D</b>	<b>Organo Nitrogen :</b>			
	Metalaxyl	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Trifluralin	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
<b>E</b>	<b>Carbamates :</b>			
	Carbofuran	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Carbaryl	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
<b>F</b>	<b>Others :</b>			
	Butachlor	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Alachlor	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Atrazine	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
	Iso Proturon	Not Detected ( LOQ: 0.01 )	Max 0.1 µg/l	APHA 22 <sup>nd</sup> Edition
<b>20</b>	<b>Polycyclic Aromatic Hydrocarbons : ( µg / l )</b>			
	Benzo ( b ) Fluoranthene	Not Detected ( LOQ : 0.01 )	Max 0.10 µg/l	APHA 22 <sup>nd</sup> Edition
	Benzo ( k ) Fluoranthene	Not Detected ( LOQ : 0.01 )	Max 0.10 µg/l	APHA 22 <sup>nd</sup> Edition
	Benzo ( ghi ) Perylene	Not Detected ( LOQ : 0.01 )	Max 0.10 µg/l	APHA 22 <sup>nd</sup> Edition
	Indeno ( 1, 2, 3 - cd ) Perylene	Not Detected ( LOQ : 0.01 )	Max 0.10 µg/l	APHA 22 <sup>nd</sup> Edition
<b>21</b>	Selenium, µg/l	Below Detection Limit ( DL : 1.0 )	Max 10 µg/l	P - 3114 B, APHA 22 <sup>nd</sup> Edition / LAB_P_SOP_37
<b>22</b>	Tetrachloroethene & Trichloroethene, µg/l	Not Detected ( LOQ : 5.0 )	Max 10 µg/l	By GC - MS

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<b>PART # B</b>				
<b>CHEMICAL PARAMETERS</b>				
23	Vinyl Chloride, µg/l	Not Detected ( LOQ : 0.01 )	Max 0.5 µg/l	By GC - MS
24	Dibromochloromethane, µg/l	Not Detected ( LOQ : 0.01 )	Max 10.0 µg/l	By GC - MS
25	Bromodichloromethane, µg/l	Below Limit of Quantification ( LOQ : 0.01 )	Max 10.0 µg/l	By GC - MS
26	Bromoform, µg / L	Not Detected ( LOQ : 0.01 )	Max 10.0 µg/l	By GC - MS
<b>PART # C</b>				
<b>INDICATOR PARAMETERS</b>				
1	Aluminium, µg/l	Below Detection Limit ( DL : 20.0 )	Max 200 µg/l	P – 3111D, APHA 22 <sup>nd</sup> Edition / LAB_P_SOP_37
2	Ammonium, mg / l	< 0.5	Max 0.5 mg / l	4500, APHA 22 <sup>nd</sup> Edition
3	Chlorides, mg / l	5.2	Max 200 mg / l	4500 B & D, APHA 22 <sup>nd</sup> Edition
4	Colour, Hazen Units	Acceptable	To Be Acceptable	P – 2120B, APHA 22 <sup>nd</sup> Edition
5	Conductivity @ 20 deg C, µS / cm	74.9	Max 2500 µS / cm @ 20 deg C	2510B, APHA 22 <sup>nd</sup> Edition
6	Hydrogen Ion Concentration	7.08	≥ 6.5 to 9.5	4500 B, APHA 22 <sup>nd</sup> Edition
7	Iron, µg/l	0.05	Max 200 µg/l	P - 3111B APHA 22 <sup>nd</sup> Edition / LAB_P_SOP_37
8	Manganese, µg/l	BDL ( DL : 5.0 )	Max 50 µg/l	P - 3111B, APHA 22 <sup>nd</sup> Edition / LAB_P_SOP_37
9	Odour	Acceptable	To Be Acceptable to consumers and no Abnormal Change	2150, APHA 22 <sup>nd</sup> Edition
10	Oxidisability, mg / l of O <sub>2</sub>	< 5.0	Max 5.0 mg / l of O <sub>2</sub>	5220 B, APHA 22 <sup>nd</sup> Edition
11	Sulphate, mg / l	< 1.0	Max 250 mg / l	P - 4500 D & E, APHA 22 <sup>nd</sup> Edition
12	Sodium, mg / l	10.5	Max 200 mg / l	3111B, APHA 22 <sup>nd</sup> Edition
13	Taste	Acceptable	To Be Acceptable to consumers and no Abnormal Change	2160C, APHA 22 <sup>nd</sup> Edition
14	Total Organic Carbon ( TOC ), mg / l	Not Detected ( DL : 0.1 )	No abnormal Change	Lab_P_SOP_147
15	Turbidity, NTU	Acceptable	To be Acceptable ( Max 1.0 NTU )	2130 D, APHA 22 <sup>nd</sup> Edition

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**LOQ : Limit of Quantification ; DL : Detection Limit ; BDL : Below Detection Limit**  
**Remark: The Water Sample conforms to 98/83 EC Specification with respect to tested parameters only.**

Authorised By

Manjunath B  
(Asst. Manager - Analytical)

Authorised By

Veena D  
(Asst. Manager – Chemical)

Authorised By

Prajesh Balakrishnan  
(Asst Manager – Microbiology )

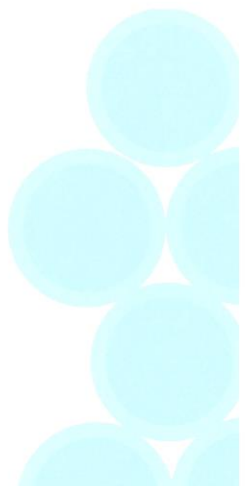
-- END OF THE TEST REPORT--

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# MARCADO TUBERÍA ELECTROSTEEL







## índice

- 1.- MARCADO SEGÚN LA NORMA EN 545.
- 2.- MARCADO ELECTROSTEEL.
- 3.- TRAZABILIDAD ELECTROSTEEL.

## 1.- MARCADO SEGÚN LA NORMA EN 545:

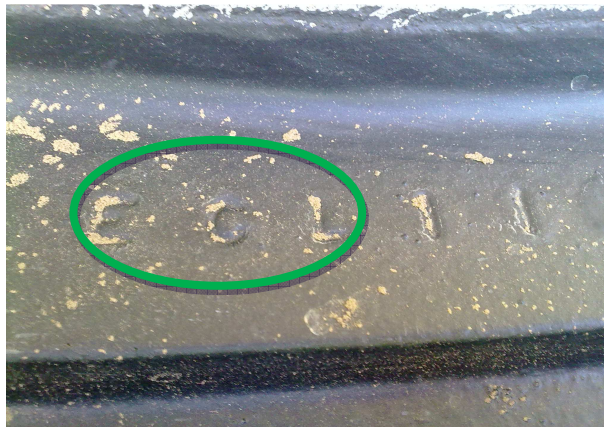
El marcado de la tubería según la norma EN 545, lo define con los siguientes puntos en su apartado 4.6:

- Nombre o marca del fabricante.
- Identificación del año de fabricación.
- Identificación como fundición dúctil.
- DN
- El PN de las bridas, si procede.
- Referencia de la norma.

## 2.- MARCADO ELECTROSTEEL:

En el interior del enchufe y directamente de molde, la tubería va marcada con:

- Fabricante : « ECL »



- Año de fabricación « 11 » (2011)



- Identificación como fundición dúctil:« DI »



- El DN:« 800 »



En la caña de la tubería y pintado:

- La referencia a la norma: «BS EN 545/ISO 2531 »





- Fabricante Electrosteel:



- Sello BSI



### 3.- TRAZABILIDAD:

Todos los tubos tienen marcados en el frente de la campana bajo la capa de pintura una trazabilidad, marcada en frío de forma unitaria con los siguientes datos:

- Día de fabricación: « 23 »



- Mes de fabricación: « L »



- Número de tubo: « 55 »



La trazabilidad lleva asociada los llamados certificados Mill test, que recogen los resultados de los ensayos en fábrica.