

DEPARTMENT OF TRANSPORT TYPE APPROVAL CERTIFICATE BE1/4/92

in respect of work , goods and materials for use in the construction and/or maintenance of trunk roads , including motorways .

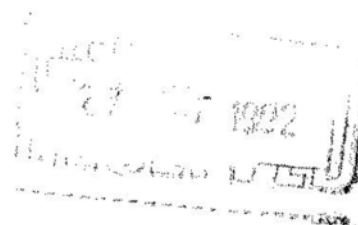
The Department approves the use of the undermentioned products as fit for their intended purpose when used in accordance with Departmental Standard BD 12/88 and the requirements of this Certificate .

1. TYPE OF MATERIALS

Corrugated Steel Buried Structure System .

2. MANUFACTURER

Tubosider United Kingdom Ltd
24 Kingsland Grange
Woolston
Warrington
WA1 4RW



3. PRODUCT DESCRIPTION

3.1. HELIBORE125 and HELIBORE 68 are Helically Wound Spirally Corrugated Galvanised Steel Culverts of circular cross-section and having the following corrugation geometry :-

	CORRUGATION	
	WAVE LENGTH	AMPLITUDE (DEPTH)
Helibore 125	125 mm	25 mm
Helibore 68	68 mm	13 mm

3.2. The culverts are as described in BBA Roads & Bridges Certificate No 91/62 and in the Technical Brochure and Data Sheets of the manufacturer current on the date of issue of this Type Approval .
The maximum span (diameter) approved is 3.6 m (see Table 1 of the BBA Certificate).

3.3. The culverts are manufactured from galvanised steel sheet having a guaranteed minimum yield strength , f_y , of 229 N/mm² and which is helically wound to the required diameter with adjacent coils joined together at the edges by means of a continuous lockseam . The minimum tensile strength of the lockseam conforms to the appropriate value in the Table at Appendix B of BD 12/88 (interpolating if necessary) and the maximum wall thickness approved is 3.5 mm . (See Tables 1 and 2 of BBA Certificate No 91/62) .

3.4. The factory cold-applied proprietary modified bitumen protective coating is described on Detail Sheet 1 of BBA Certificate No 91/62 . This satisfies Clause 8.3 of BD 12/88 and on the basis of the BBA certificate a design life of 25 years for the coating is recognised by DTp on the assumption that the maintenance required in Sections 4 and 5 of Detail Sheet 1 of the BBA Certificate , is carried out by the user . In the absence of this maintenance the coating shall have zero design life .

3.5. The factory applied proprietary bitumen invert protection is described on Detail Sheet 2 of BBA Certificate No 91/62. This satisfies Clause 8.4 of BD 12/88 and on the basis of the BBA certificate is recognised by DTp as suitable for use at gradients of up to 3% and as possessing a design life of 20 years on the assumption that the maintenance required in Sections 4 and 5 of Detail Sheet 2 of the BBA Certificate , is carried out by the user . In the absence of this maintenance the invert protection shall have zero design life .

4. PURPOSE

Use , only as described in DTp Standard BD 12/88 and in BBA Roads & Bridges Certificate No 91/62 .

5. RELATED CLAUSES IN THE SPECIFICATION FOR HIGHWAY WORKS

CLAUSE 104 -- Quality Assurance and Standards

CLAUSE 623 -- Earthworks for Corrugated Steel Buried Structures of Span exceeding 900mm

CLAUSE 2501SR-- Corrugated Steel Buried Structures of Span Exceeding 900mm .(CLAUSE 2501 has been amended and is now designated CLAUSE 2501SR , which is attached herewith as ANNEX A) .

6. DEPARTMENTAL REQUIREMENTS

6.1 All the requirements of DTP Standard BD 12/88 .

6.2. In particular , a current BBA Roads & Bridges Certificate for any bituminous or other proprietary protective coating on the galvanised steel , if it is intended to contribute to the design life of the structure .

6.3. Also , a current BBA Roads & Bridges Certificate for any paved invert other than reinforced concrete .

7. QUALITY ASSURANCE .

7.1. The continuing validity of this certificate is conditional upon an acceptable quality of workmanship and materials being maintained and upon satisfactory findings of such further checks as the Department or its authorised representatives may think necessary .

7.2. The quality assurance scheme conforming to BS 5750 : Part 2 : 1987 provided by BBA , as described in BBA Roads & Bridges Certificate No 91/62 will also be recognised .

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8. PERIOD OF VALIDITY


Unlimited provided that :-

8.1 The product continues to conform to the description in Section 3 above.

8.2 The requirements of Section 6 , above , continue to be met .

8.3 The conditions regarding quality in Section 7.1., above , continue to be met .

NOTE : The current validity of this Certificate may be checked by contacting Mr P H Dawe , Bridges Engineering Division ,
Tel: 071-921-4744 .



T A ROCHESTER
Chief Highway Engineer
Department of Transport
Room 4/20
St Christopher House
Southwark St.
London SE1 OTE

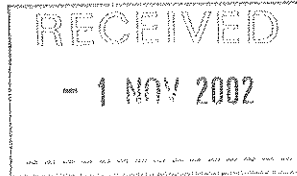
9 June 1992

Our ref: HA 34/33/06
Your ref:

A315a
Romney House
43 Marsham Street
LONDON SW1P 3HW

<http://www.highways.gov.uk>

Mr J Dwyer
Managing Director
Tubosider UK Limited
24 Kingsland Grange,
Woolston
Warrington WA1 4RW



Direct Line: 020-7081-7695
Fax: 020-7081-7631

30 October 2002

Dear Jim,

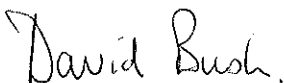
**RELATIONSHIP BETWEEN
TYPE APPROVAL CERTIFICATES BE1/2/91 AND BE1/4/92 AND
BD 12/01 DESIGN OF CORRUGATED STEEL BURIED STRUCTURES**

I am writing in response to the enquiry of your Paul Ansell about the relationship between Type Approval Certificates BE1/2/91 and BE1/4/92 held by Tubosider UK Limited and BD 12/01 "Design of Corrugated Steel Buried Structures with Spans greater than 0.9metres and up to 8.0 metres."

I understand that the materials and manufacture of the Tubosider segmentally and helically wound structures are unchanged since issue of the Type Approval Certificates. The basis of CSBS design remains unchanged so the Certificates continue to be valid and may be used in conjunction with BD 12/01. Where the Certificates make reference to BD 12/88, then the subject shall be dealt with by reference to BD 12/01. Where BD 12/88 has been superseded, eg on requirements for durability etc, then the latest requirements of BD 12/01 shall be used.

Information on the currency of Type Approval Certificates is given in SA1/01 List of Approved / Registered Products (MCHW0), or by enquiry to the Highways Agency's Director of Safety, Standards and Research, presently at Romney House, 43 Marsham Street, London SW1P 3HW.

Yours sincerely



David Bush
Highways Infrastructure Group
E-mail: david.bush@highways.gsi.gov.uk



INVESTOR IN PEOPLE



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