

Federal Railway Authority, P.O. Box 200565, D-53135 Bonn

Leonhard Weiss GmbH & Co. KG  
Leonhard-Weiss-Str. 2-3  
D-74589 Satteldorf

Reference no. (please state in all correspondence)  
2151-21izbia/008-2101#025-(037/09-Typ)

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Date: 09/20/2010  
VMS number  
3262769

Re: Ram tube foundation for individual signals,  
*here: Type approval for standard foundation, design LW 2010*  
Reference: Your letter dated 09/24/2009 – GUN/ybü  
Enclosures: 1 folder

Dear Sir or Madam,

With the above letter - GUN/ybü - dated 09/24/2009, you have applied for a type approval for your standard foundation LW 2010.

The following

### **Administrative Decision**

is taken in this respect:

1. A type approval for the production and utilization of ram tube foundations, design LW 2010, for individual signals as standard foundation is hereby granted.

The notes and conditions outlined in the test report shall be complied with. They shall continue to apply in the collateral clauses at hand unless otherwise ruled or supplemented.

The type approval is limited in time until 09/30/2015.  
The notification consists of 6 pages.

2. **Explanations regarding the subject matter of the application / Object**

The ram tube foundations may be utilized for foundation work for individual signals in accordance with the Directives of BZA Munich no. 6260/2440 Page 15 and S 8000.5.6. The design is two-piece, consisting of the ram tube that remains in the subsoil and the pile head plate with welded inner tube, which will be cast into concrete.

3. **Planning parameters - Bridge**

n/a

4. **Materials**

Cf. plan no. 1 S 01a

## 5. Documents

The following documents (drawings, proof of stability, test reports, etc.) are the basis of the administrative decision at hand:

### 5.1 Drawings

Title / component	Plan / Page no.	Author
Special foundation for individual signals – overview plan - Foundation design LW 2010	Plan no. 1 S 01a	Dr. Schleicher engineering office D-15732 Eichwalde

### 5.2 Proof of stability

No.	Title / component	Author	Date
	Static calculations for type approval (pages 1 – 70)	Dr. Schleicher engineering office D-15732 Eichwalde	05/10/2010

### 5.3 Test reports / Test certificates

No.	Title	Author	Date
	Constructional test – type test report Ram tube foundation for individual signals	Dr.-Ing. Th. Klähne D-10179 Berlin	07/26/2010

### 5.4 UiG / Technical notification

No.	Title	Author	Date / Gz
	Permissible deviations of the beam direction of light points and the respective design loads for light signals	Federal Railway Authority, headquarters office, Munich	07/14/2010 / 2276 Sso
S 8240.1.2t*	Guideline for the production of ram tube foundations	BZA Munich	03/19/1984
6260/2440 Page 15	Arrangement of multi-aspect block signals and station signals with and without auxiliary display for GC clearance gauges - KS signals -	BZA Munich	08/01/1991
S 8000.5.6	Arrangement of station signals with warning signal function Station or warning signals I with and without auxiliary display for GC clearance gauges station signal – KS signals -	BZA Munich	08/01/1991

### 5.5 Other documents

No.	Title	Author	Date
	Explanatory report and design description	Leonhard Weiss GmbH & Co KG D- 74589 Satteldorf	06/07/2010. 2009
	Mounting instructions for signal foundation LW 2010		w/o

## **6. Applicable regulations and stipulations**

The notification is based on the following technical construction stipulations / acknowledged rules of technology:

- (1) DIN technical report 101: Effects on bridges (March 2009 issue)
- (2) DIN 18800 Part 7: 2008-11 Steel constructions – performance and manufacturer’s qualification
- (3) Directive 804: Planning, building and maintenance of railway bridges (and other engineering buildings - in force as of 05/01/2003)
- (4) Directive 804.9020: Master planning of viaducts (in force as of 11/01/2003)
- (5) DAfStb Directive: Preparation and utilization of cement-based cast concrete and grouting mortar (June 2006 issue)
- (6) DASt Directive 022: 2009-08 – Hot-dip galvanization of load-bearing steel components

## **7. Collateral clauses**

The type approval is linked with the following collateral clauses:

### **7.1 General collateral clauses**

- 7.1.1 The holder of the type approval shall make available to the client a copy of the administrative decision together with the documents required for production and shall point out the fact that these documents must be available at the point of utilization.

### **7.2 Specific collateral clauses**

- 7.2.1 Prior to the production of the ram tube foundation, investigate and record the load-bearing capacity of the subsoil.
- 7.2.2 Comply with the mounting instructions of the holder of the type approval – Leonhard Weiss - for the production of the ram tube foundation. A record will have to be prepared on production.
- 7.2.3 The enterprise charged with the execution of the welding operations must be in the possession of a certification for welding according to DIN 18 800 Part 7 Category E.
- 7.2.4 Inspect the weld seams of the hot-dip galvanized components for perpendicularity and stress cracks after hot-dip galvanization.
- 7.2.5 Include modifications and supplements that result from the constructional and construction supervision inspection in the final planning documents.

## **8. Proviso**

The type approval may be revoked if the stipulations of the decision are not complied with. The stipulations of the type approval may be revoked, subsequently supplemented or modified, particularly if new technical findings make this necessary.

## **9. Costs**

The costs of the approval procedure are born by the applicant. A separate bill of costs will be issued.

## **10. Notes**

- 10.1 The type approval shall neither substitute the decision in accordance with Section 18 AEG that is required for the performance of construction projects, nor does it exempt from the obligation of performing the process of construction supervision

acc. to VV Bau (state 08/19/2009). This decision shall be included with the notice acc. to Sections 18 following of VV Bau for a concrete construction project together with the documents on which the type approval is based.

- 10.2 The type approval is granted notwithstanding the rights of third parties, particularly that of private intellectual property rights.
- 10.3 The type approval may be utilized only if complete. Any publication of excerpts requires the consent of the approving department of the Federal Railway Authority EBA.

## **Grounds**

In accordance with Section 3 of the Law on the Federal Railway Administration (Bundeseisenbahnverwaltungsgesetz – BEVVG § 3) dated 12/27/1993 (BGBl I, Pages 2378 & 2394) in its currently valid version, the Federal Railway Authority (EBA) in conjunction with Section 4 Para. 2 of the General Railway Act (§4 Abs. 2 AEG) dated 12/27/1993 (BGBl. I Pages 2378, 2396, 1994 I Page 2439), each in its currently valid version, the Federal Railway Authority EBA is responsible for construction approvals, acceptance inspections, verification tests, the granting of approvals & authorizations as well as for the supervision, erection, modification, maintenance and operation of the operations facilities of the Federal Railways.

The type approval was applied for, since a similar version of the ram tube foundation is to be used in multiple locations.

The type approval was granted, since the documents and proof submitted provide evidence for the stability of the ram tube foundation and since – if the conditions of the decision at hand are complied with – public safety and the safety of railroad traffic will be ensured.

Fees and costs will be levied for the decision at hand in accordance with Section 3, Para. 4 Page 1 BEVVG in conjunction with the Ordinance on fees and expenditures for official acts of the Federal Railway Administration (BEGebV dated 03/27/2008, BGBl. I, Page 546) in its currently valid version.

## **Information on legal remedy**

Objection may be filed against the notification at hand within one month after publication.

The objection will have to be filed in writing or put on record with the Federal Railway Authority, Heinemannstraße 6. D-53175 Bonn. The deadline is also complied with if objections are filed at a branch of the Federal Railway Authority.

Kind regards  
by proxy  
signed Schollmeier

(official seal: Headquarters \* Federal Railway Authority)  
certified:  
(illegible signature) TROAR

**Mark of compliance of the Federal Railway Authority**

Manufacturer's name

Type approval

2151-21izbia/008-

2101#025-(037/09-Typ)

Federal Railway Authority EBA

(certifying department)

Dimension ratio (outside dimension): w:h = 0.75 ( $\geq$  4.5 cm : 6.0 cm)