



## AWS D1.1 Interpretation

**Subject:** IIW Blocks  
**Code Edition:** D1.1-90  
**Code Provision:** Subsection 6.21.2.3  
**AWS Log:** IR1-91-032-05

**Inquiry:** This inquiry covers Section 6, subsection 6.21.2.3 of AWS D1.1-90, *Structural Welding Code-Steel*. The use of the International Institute of Welding (IIW) reference block, Type 2, is discussed. We have found that using the Type 2 reference block for calibration doesn't follow the Code. The Code states that there should be an indication at 4 in. and 8 in. on the CRT for a Type 2 block. Yet, when the Type 2 reference block is used, there isn't an indication at 8 in. An 8-in. indication is not obtained because the signal travels in this fashion: the signal leaves the transducer, and attenuates out into the block.

**Response:** The calibration procedure referenced in 6.21.2.3 is correct as written. The 8-in. indication is attained from the two milled slots which are shown as the reference point for the 4-in. radius on the Type 2 IIW Blocks.

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AWS D1.1, *Structural Welding Code—Steel*, is prepared by the AWS Structural Welding Committee. Because the Code is written in the form of a specification, it cannot present background material or discuss the committee's intent.

Since the publication of the first edition of the Code, the nature of inquiries directed to the American Welding Society and the Structural Welding Committee has indicated that there are some requirements in the Code that are either difficult to understand or not sufficiently specific, and other that appear to be overly conservative.

It should be recognized that the fundamental premise of the Code is to provide general stipulations applicable to any situation and to leave sufficient latitude for the exercise of engineering judgment. Another point to be recognized is that the Code represents the collective experience of the committee; and, while some provisions may seem overly conservative, they have been based on sound engineering practice.