CWA UpDate

Canadian Welding Association | Association canadienne de soudage

Issue 5- March 1st (2016/2017 season) Hamilton and Region Chapter

Please plan to attend our next seminar

Wednesday March 1, 2017
Holiday Inn Burlington Hotel & Conference Centre"
Located at 3063 South Service Road, Burlington. Attitude adjustment: 5:30 p.m. Dinner: 6:00 (Sharp) Seminar 7:00 pm Dinner entrance fees for this meeting are: $20 for students, $35.00 (members and $40 for non-members
Note: "*First year"* basic membership is free (*at present*)
You **must** reserve for Dinner.

Topic

Comparative Review of Welding Standards Followed Around the World: CSA vs AWS & ISO
Presented by: ***Cristian Zanfir, Assistant Manager Standards, CWB Group***

The purpose of this presentation is to provide the audience with a comparative review of these Standards' requirements and an overview of their similarities and differences. While in Canada and US welding requirements are driven by the building code and product standards, in Europe the welding requirements are driven by legislation and product standards. This presentation will describe the building code and legislation requirements. Also, some examples will be given to show the requirements for qualification of welding personnel and welding procedures as outlined in these standards.

Biography: Cristian Zanfir joined CWB Group in 2004 when started his new career as a certification representative in Ontario region. During his career with the CWB Group he's held several roles like Procedure Verification Engineer, Supervisor Ontario Operations, Supervisor Procedure Verification Engineer and Electrodes Certification Department. Today, Cristian is working for the Office of Public Safety of the CWB Group as Assistant Manager Standards. He's main role is to contribute to developing standards within a large number of standards committees of the AWS, ASME, CSA and ISO organizations.

Cristian earned his Bachelor of Engineering in Welding in Romania and after 4 years of experience as Field Engineer he decided to relocate to Canada. During the 4 years of work in Romania he gained welding experience in the field of pipeline and other many applications available in refineries and petrochemical plants. He is also a Level 2 Visual Welding Inspector and is currently working on his P. Eng. License with the Professional Engineer Ontario Association.

Wednesday April 5/2017
Topic: Industry Education Forum
Contact any Hamilton Chapter Board Member for Tickets.
Note! You must reserve in advance

Please register
by contacting **Franco Piccoli**
(905) 317-6543
by Friday February 27, 2017
Alternate Contact:
Don Hutt (905) 548-7200 (ext.3079)

Educational Information:

Extracted from CWB module 07 (page 02)

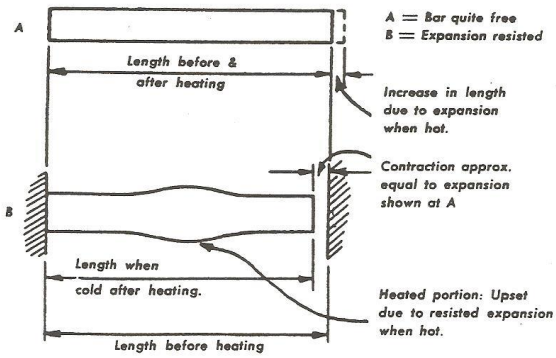

Fig. 1

Behaviour of Metal Bar When Heated and Cooled Under Different Conditions.

At high temperatures metal becomes plastic and may be compared to a piece of rubber in behaviour, that is, compression in one direction causes expansion in other directions. Therefore, in the case of the above mentioned bar, if lengthwise movement is prevented, expansion in other directions results. This is shown at B, by an increase in diameter of the heated portion, because this part has to absorb the volume of metal which was represented by the longitudinal expansion, as shown at A. The prevented expansion produces just the same effect as if the bar were allowed to expand longitudinally and then the ends placed between the jaws of a vise and compressed to its original length. The upsetting (i.e., swelling of the heated part) is known as permanent deformation, that is, it will not disappear when the bar cools. Therefore, when the bar is cold it will be shorter by an amount equal to the expansion which would have taken place if the bar had been free.

In the above examples we have considered (a) free expansion and contraction and (b) restricted expansion and free contraction. Now let us consider what happens when expansion and contraction are both resisted, that is, when the ends of the bar are gripped, as shown in Fig. 2, so that they will not allow either expansion or contraction to take place.

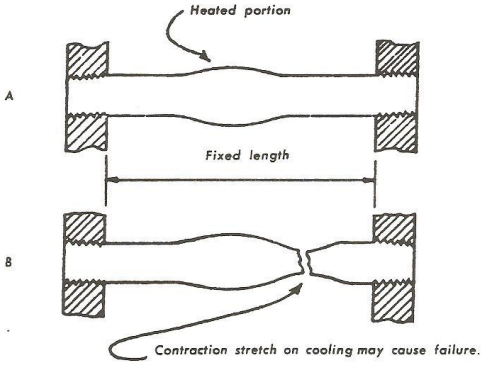

Fig. 2

Behaviour of Metal Bar When Heated and Cooled Under Conditions in Which Expansion and Contraction are Prevented.

(for more information see page 02 CWB module 07 *"Distortion and Residual Stress")*

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