

**THE INDIAN INSTITUTE OF WELDING**  
(A Member Society of The International Institute of Welding)



**Information Booklet**  
**for**  
**National Skill Competition on Best Welders**  
**Sponsored by**  
**M/s ELCA Laboratories, Thane**



## Categories

- |                           |   |                                          |
|---------------------------|---|------------------------------------------|
| A. Best Structural Welder | - | SMAW Process – 3G Position, Carbon Steel |
| B. Best Structural Welder | - | GMAW Process – 3G Position, Carbon Steel |
| C. Best Pipe Welder       | - | SMAW Process – 6G Position, Carbon Steel |
| D. Best Pipe Welder       | - | GMAW Process – 6G Position, Carbon Steel |
| E. Best Pipe Welder       | - | GTAW Process – 6G Position, Carbon Steel |
| F. Best Pipe Welder       | - | OFW Process – 6G Position, Carbon Steel  |

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## GENERAL INFORMATION

- The Indian Institute of Welding conducts the “**Best Welder**” competition every year.
- The preliminaries are conducted at local branches of IIW-INDIA. The winners from branch level competitions are eligible to take part in the final.
- The National Level Competition (Finals) - for the Best Welders (Best Structural Welders and Best Pipe Welders) is held during the National Welding Seminar (or the yearly event) organized by the institute at different venues.
- This competition is FREE and open to all members of the institute as well as to the non-members. The desirous candidates are required to contact the respective branches before 21<sup>st</sup> October 2017.
- Only the best candidate at the branch level in each of the six different categories shall be eligible for the National level competition.
- The candidates selected for the National Level Competition shall be provided with free Boarding and Lodging by the Organisers of the National Welding Seminar (or the yearly event).
- The Best Welders selected at Finals will be given the “IIW–INDIA ELCA Lab Best Welder Award”, inclusive of a Cash prize of ₹ 5000.00 and a certificate for each Category.
- The past winners of the National Level Competitions for the above are not eligible to take part in this competition.

## BEST WELDER COMPETITION – 2017

### Eligibility for the Best Welders:

1. Must be able to read and write in English and / or in any Indian Language.
2. Must have minimum 3 years’ experience in practical welding of different materials.
3. Must have basic theoretical knowledge of welding of different materials.
4. Must have some knowledge of the Codes / Standards being followed in their work place.
5. Must be within 34 years of age as on 31.12.2017.

### General Rules / Procedures

1. To be held across all the branches of IIW- India for Preliminary Round.
2. Branches to propose one person as the responsible contact, for this competition.
3. This year, the International Congress (IC 2017) is scheduled during 7<sup>th</sup> to 9<sup>th</sup> December 2017, in Chennai. Therefore, final competition is planned to be conducted during the 1<sup>st</sup> week of December (2017), at Chennai.
4. The branch level competitions must be conducted within 4<sup>th</sup> November 2017, so that the names of selected personnel can be sent for the National Level competitions by the 15<sup>th</sup> November 2017, positively.
5. Carrying out the competition through the branch will be the responsibility of each branch.
6. This will entail, arranging a suitable workshop, material, consumables, safety gear and other essentials as required.
7. This will also entail arranging suitable Assessors for evaluating the candidate's performance.
8. Only two to three days (night) stay is expected at the venue for the competition and declaration of results.
9. The competition can be carried out in two time slots on the same day. Number of machines available should be enough to achieve this objective.
10. Competition will be for two types of Welders, Structural Welder and Pipe Welder.  
Structural welder: SMAW & GMAW Processes – 3 G Position, Carbon Steel  
Pipe Welder: SMAW, GMAW, GTAW & OFW Processes – 6 G Position, Carbon Steel

### The Criteria

1. Only one pre-prepared test coupon (either two pipe pieces or two plate pieces, as applicable, to make one joint) shall be given to each competitor.
2. The welded test coupon should qualify in Visual and Radiography Tests.
3. Total Marks: 100. (50 marks for Visual assessment and 50 marks for Radiography assessment)

4. In case there is a Tie in marks, completion time will be the factor for winning the competition. i.e., Welder, who have completed earlier, will be the winner.

### **Specification for Testing**

#### **Material:**

1. Plate: ASTM A36 / IS 2052 / S235 or Equivalent Carbon Steel.
2. Pipe: ASTM A106 Gr. B / API 5L Gr. B / 20# or Equivalent Carbon Steel.

#### **Dimension:**

1. Plate: 300 mm X 125 mm X 10 mm (2 Pieces) for Structural category A & B (SMAW & GMAW)
2. Pipe: NB 6" Sch. 80 X 125 mm lg. (2 pieces) for Pipe Category C & D (SMAW & GMAW)
3. Pipe: NB 2" Sch. 40 X 125 mm lg. (2 pieces) for Pipe Category E & F (GTAW & OFW)

#### **Assembly and Tack Welding:**

1. Bevel angle: 60 ~ 65 degree
2. Root gap and root face: As per Welder's choice
3. Tack welding: Plate shall be tacked in both end of the groove with no more than 15 mm length each.  
6" Pipe shall be tacked in 3 positions with no more than 20 mm length each.  
2" Pipe shall be tacked in 2 positions with no more than 10 mm length each.

#### **Consumables:**

1. Category A: E7018 dia 2.5 mm & 3.2 mm
2. Category B: ER70S-6 dia 1.2 mm
3. Category C: E6010 dia 2.5 mm for root and E7018 dia 2.5 mm & 3.2 mm for subsequent passes.
4. Category D: ER70S-6 dia 1.2 mm for root and subsequent passes.
5. Category E: ER70S-6 dia 2 mm for root and dia 2 mm & 2.4 mm for subsequent passes.
6. Category F: ER70S-6 dia 2 mm for root and dia 2 mm & 2.4 mm for subsequent passes.

#### **Cleaning:**

Grinding is not allowed during and after welding. Hacksaw Blade, file and brush can be used for cleaning.

#### **Completion Time:**

1. Category A: 50 min.
2. Category B: 45 min.
3. Category C: 100 min.
4. Category D: 90 min.
5. Category E: 80 min.
6. Category F: 70 min.

#### **Assessment:**

1. Visual assessment for all coupons shall be done in accordance with ISO 5817.
2. Radiography assessment (only for the visually qualified test coupons) shall be done in accordance with ASME SEC. IX 191.1.2.
3. Final marks will be provided by adding both the marks of visual and radiographic assessments.

**Note:** It is suggested that minimum of 2 assessors each for visual and radiographic assessments shall be deputed. Radiography Laboratory may also act as the Third Party Assessor for radiographic assessments.

#### **Certification:**

1. Certificate of Participation to be issued to each welder at branch level competition by the respective Branch. Certificates also to be issued to the Winner in each category by the Branch.

2. Certificate of Participation to be issued to each welder at Final Level by the Organising Committee of annual event (IC 2017). Certificates also to be issued to the Winners in each category at Finals by the IIW-India HO during the annual event (IC 2017).

**ATTACHMENT:** Proforma for Application / Nomination for Best Welder's Competition.

**PROFORMA FOR APPLICATION / NOMINATION FOR  
BEST WELDER'S COMPETITION**

**Application for Best** .....

(Please write whether Structural or Pipe Welder and the category)

**From I.I.W. Branch** .....

(State the Name / location)

Photographs  
(1 photo to be  
affixed here  
and 2 photos to  
be stapled with  
the form)

**PLEASE FILL ALL THE DETAILS IN CAPITAL LETTERS**

1. Name :
2. Date of Birth :
3. Present Address :
4. Mobile & landline nos. :
5. E-mail id :
6. Photo identity Reference Document :
7. Name of Sponsoring Organization (if Applicable) :
8. Address of the Organization :  
(with Tel. No., Fax No. & Email)
9. Educational Qualification of the Candidate (optional) :

S. No.	Qualification	Institute	Major Subjects

6. Professional Experience :
7. Specific achievements in the Welding Field (optional) :  
(State in about 100 / 150 words attaching separate sheet)

**Declaration:** I hereby declare that, I will follow all the instructions given for the Best Welder Competition. I will take part in a fair and friendly manner and will accept the results declared, as final. I also declare that all the particulars stated above are true.

Signature of the applicant : \_\_\_\_\_ Date : \_\_\_\_\_

**Signature of the Nominating authority (if Company Sponsored) :**

Name: \_\_\_\_\_ Designation \_\_\_\_\_

**Branch Office Entries :**

Form Received From -----

on -----day, -----(date) at -----Hrs. (Time)

Form No ----- of Structural Welder (A / B) / Pipe Welder (C/D/E/F)

Signature of Receiving Authority of the branch :

Name :

Designation :