

K Selvakumar *(India)*

The Welding Research Institute (WRI) at Bharat Heavy Electricals Limited (BHEL) in Tiruchirappalli (Trichy), India, will celebrate its 50-year anniversary of its formation in 2025. It was established on Nov 1 1975 by the Government of India with assistance from UNIDO/UNDP under the aegis of BHEL. It is the premier research institute in welding in India and has been instrumental in promoting welding research in the country.

To recognise this achievement, K Selvakumar, a welding technician at WRI, decided to create a welded art exhibit which became the runner-up in the IIW-India National Competition Welded Marvels 2024 “Project Trash to Treasure”.

KALPAWRIKSHA symbolises the wish fulfilling efforts in applied welding research at WRI. This has evolved out of churning of the mind, just like the mythological Kalpavriksha from churning of Palazhi. The tree exhibit has many materials, material sizes, welding processes, welding positions, weld metal sizes and edge preparations, reflecting the diverse process expertise of WRI and made from scrap material for a beautiful display.

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Exhibit “KALPAWRIKSHA”

The tree is made out of different scrap materials and cut bits of electrodes. The base is made of bead-on-plate welding using the Submerged Arc Welding (SAW) process on 16 mm thick alloy steel plate (SA 335 Gr.22).

The bottom trunk of the tree is made of a cut piece of 127 mm dia carbon steel pipe welded to the top trunk made of 114mm dia alloy steel using Flux Cored Arc Welding (FCAW).

To obtain the required finish representing the bark of the tree, beads were deposited using Gas Metal Arc Welding (GMAW). Limbs of the tree are cut bits of alloy steel tube (Gr.12) attached to the trunk by fillet welds and rod at the other end made by Shielded Metal Arc Welding (SMAW).

Further branches are made of 6.3 mm dia. core wires of expired E7018 electrodes and 2.4 mm dia. Gas Tungsten Arc Welding (GTAW) filler rods. The shiny bunch of leaves of the tree are made from 0.3 mm thick aluminium sheet.

The fully grown five prop/aerial roots in the tree indicate the five decades of service to the Nation, with sprouts for emerging decades.

On the whole, the welded art exhibit symbolises the expertise and skills sets of the manpower of Team WRI.

Dimensions of Exhibit

90 cm high x 90 cm wide x 70 cm deep





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