

Shri G. Nageswara Rao, Chairman, AERB inaugurated “National Seminar on Welding Science and Technology (NSWEST) – Present Status & Future Direction” on 23rd July 2021.

Shri G. Nageswara Rao, Chairman, AERB inaugurated “National Seminar on Welding Science and Technology (NSWEST) – Present Status & Future Direction” on 23rd July 2021. The two-days seminar was held during 23-24 July 2021. This was organized by the Indian Institute of Welding (IIW) – Chennai branch on virtual platform from IGCAR Kalpakkam. Dr. A.K. Bhaduri, Director, IGCAR delivered the Plenary Talk and Dr. B. Venkatraman, Director, Safety, Quality & Resource Management and Engineering Services Group released the e-copy of the seminar souvenir.



NSWEST-2021 on virtual platform

The national seminar was attended by more than 250 delegates. The experts in the field of welding science & technology from national & international level delivered invited lectures on various topics. In total, 140 lectures were delivered on virtual platform comprising 100 contributed papers and 40 invited lectures.

Chairman, AERB appreciated IIW Chennai branch for organising this seminar amid pandemic and congratulated the organising committee for inviting experts from abroad and national academic institutes & industry who delivered lectures on the latest developments in welding technology. The seminar was of national importance and it has high relevance to projects in Department of Atomic Energy. He appreciated everyone for demonstrating resilience to overcome the Covid-19 crisis, continuing the routines and planning for the future.

Chairman, AERB in his address emphasised the role of new materials, advanced welding process like electron beam welding, use of modern technologies in welding automation, welding of dissimilar materials, minimisation of residual stresses to prevent fatigue failures in the welded joints, post weld heat treatment (PWHT) on welded joints and ASME codal guidelines. He suggested for studies on stress corrosion cracking (SCC), heat affected zone (HAZ) of weld joints, meeting leak before break (LBB) criteria for safety considerations, application of advanced non-destructive examination (NDE) techniques for quality assurance etc.

He further dwelled on welding, fabrication, repair, reclamation, in service inspection, integrity assessment and life extension of critical nuclear components like reactor pressure vessel (RPV) in LWR, main vessel-safety vessel, grid plate in fast reactor considering neutron induced radiation damage on reactor components. He suggested to adopt methodology to finish most of the fabrication works of a nuclear component at factory and minimize work at site to overcome limitations at site conditions.



NSWEST-2021 organised by Indian Institute of Welding (IIW) - Chennai branch on virtual platform from IGCAR Kalpakkam

He emphasised to strengthen capabilities to optimize service life of reactor core components by understanding the mechanical properties degradation and effects of neutron irradiation on welds & their heat affected zones (HAZs) as these locations have high probability of weld defects. He said welding technology is critical for supporting the extension of nuclear power plant service lifetime beyond 60 years. He narrated the incident (occurred in 1988) of moderator inlet manifolds in MAPS reactors due to failure of weld fillet joint of nelson studs in the calandria vessel. He also spoke on role of emerging advanced nuclear reactors and small modular reactors which will contribute for future clean energy requirements.
