

Transforming Skill Landscape

Shortage of skilled operators has been a major challenge faced by the infrastructure and construction industry for the past many years. **HS Mohan, CEO, Infrastructure Equipment Skill Council (IESC)**, elaborates on the current scenario of skill development and the role of IESC in narrowing the skill gap in the industry.

Over the years' growth in the infrastructure equipment sector has been synonymous with the economic health of the country. In 2018, the sale of construction equipment was around 82,500 units and is expected to touch 300,000 units over the next decade.

The journey begins

With existing shortage of skilled manpower, coupled with this anticipated growth, an overall requirement of nearly two million operators and mechanics was projected.

Realising this futuristic need and with the existing vocational education system being unable to fully support the industry, the Infrastructure Equipment Skill Council (IESC) was formed in 2014 as an apex body to spearhead the skilling of workforce in the sector. IESC established its head office in Bengaluru in end-2014 and commenced operations with primary focus on training and certification of operators and mechanics.

The Council promoted by the Indian Construction Equipment Manufacturers' Association (ICEMA), is funded partly by contributions from the industry and balance by the National Skill Development Corporation (NSDC). The IESC works in close coordination with the Confederation of India Industry (CII).

The IESC presently has 36 members comprising original equipment manufacturers (OEMs), equipment financiers, component suppliers, etc, whose products constitute active engagement of over

90 per cent of the industry's workforce.

The Council is governed by a 19-member body comprising senior executives from all segments of the industry as well as representatives from related bodies like Department of Heavy Industries, Builders' Association of India (BAI), financial institutions, academia, NSDC and from the user industry.

The mission of the IESC is to transform the skill landscape in the sector by: training over a million operators and mechanics in the next 10 years; certifying over 5,000 trainers over the next decade; accrediting around 400 training partners to deliver training; and assisting certified personnel in job placements in India and abroad.

The journey so far: Initiatives undertaken

IESC developed National Occupational Standards (NOS) and Qualification Packs (QPs) for 39 job roles; validated and in use by the industry; maximum at NSQF Levels 3 and 4 Operators and Mechanics, and Level 7 for Supervisors covering over 80 per cent of workforce in the industry. All these standards were developed in close coordination with construction, mining and user industry.

The job roles of operators and, to an extent, mechanics being non-aspirational; for the first time a career progression path has been mapped, which has been appreciated in the industry.

Accreditation of around 60 training partners pan India, majority



HS Mohan,
CEO, IESC.

of whom are OEMs and their associates followed by empanelment of nearly 230 qualified and certified trainers from the industry, has enabled the Council to train around 18,000 personnel to date.

MOUs have been signed with various state skill development missions such as Kerala, Andhra Pradesh, Assam, Uttarakhand, Gujarat, Jharkhand and Maharashtra to scale up skilling activities. Similar proposals with Rajasthan are in the pipeline.

Following the MOU with National Highways & Infrastructure Development Corporation (NHIDCL), IESC has successfully completed the initial round of programs to skill personnel being employed at various road construction project sites in the North East. Training the project-affected people and employing them for the NHIDCL projects.

Like-wise, initiatives for skill

development in organisations like CIL, MOIL and Indian Army have reached the delivery stage. Programs with AICTE-affiliated colleges have already commenced. GAIL training under special category for their existing personnel at different sites is in execution. The Council is working closely with auto sector and logistic SSC's for creating Centres of Excellence.

The journey ahead: Challenges and opportunities

The growth rate of the construction equipment sector is largely reflective of the growth in the infrastructure segment in India. The volume of equipment sales is expected to grow from around 49,700 units in 2015 valued at \$2.8 billion at a realistic rate of 11.8 per cent to over 100,000 units in 2020; value approximately \$6 billion.

It is estimated that over a million additional trained operators and maintenance personnel would be required to meet the projected growth of construction equipment in the coming years. Formal training and certification of the current workforce will also be critical, considering their

IESC TRAINING INITIATIVES – AT A GLANCE

Equipment portfolio

NOS and QPs for 39 job roles developed and validated NSQF Level 3, 4 and 7 (operators, mechanics and supervisors)
Over 80 per cent of workforce in industry being covered

Training delivery

- Number of training centres: 55
- Number of qualified trainers: 230
- RPL 4 Assessors Certified: 153
- Personnel trained: Over 17,000
- CII-Confederation of Indian Industry-accredited as Assessment Agency
- Second Assessment Agency: Co Cubes appointed during 2018-19

bearing on the equipment operating and maintenance costs.

Around 60 per cent of our GDP is contributed by service sector. Manufacturing sector has been almost stagnant in the last decade-and-a-half. Skilling does not create jobs. Jobs are a function of growth of economy, expansion of service sector enterprises, export growth and infrastructure

EQUIPMENT COVERED

- Backhoe loader
- Hydraulic excavators
- Mobile cranes
- Compactors
- Wheel loaders
- Concrete pumps
- Wheeled crushers
- Tracked crushers
- Static crushers
- Screeners
- Batching plants
- Hot mix plants
- Transit mixers
- Self-loading mixers
- Wheeled pavers
- Tracked pavers
- Motor graders
- Crawler dozers
- Dump trucks
- Compressors
- Telescopic handlers
- Tower cranes
- Skid-steer loaders
- Boring equipment

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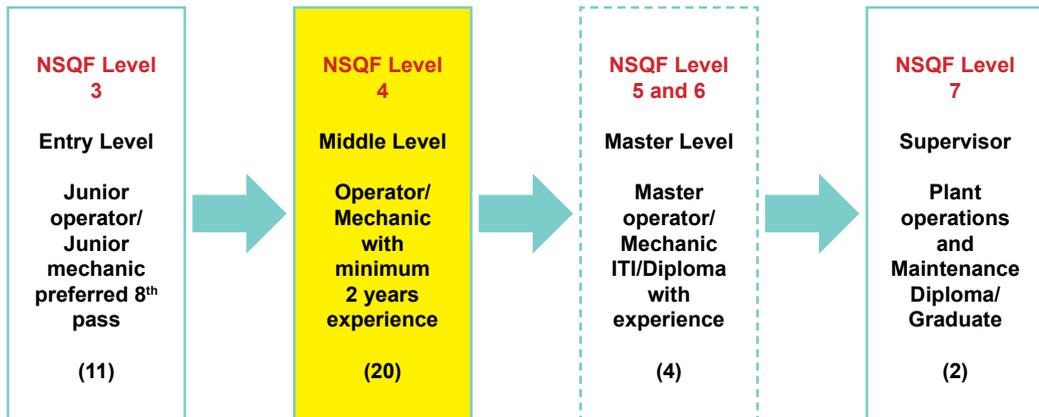


Over a million additional trained operators and maintenance personnel would be required to meet the projected growth of construction equipment in the coming years.

developments. Though being promoted by equipment manufacturers, the operations of IESC is de facto in the service industry, which is the major contributor to the GDP.

The major challenges are primarily the job roles of operators and mechanics to an extent being non-aspirational; and no visible demand for certified operators. With Construction, Earth Moving, Material Handling & Mining Machinery Act (CEMM ACT 2016) is in the offing or till such time an interim government mandate for certified/licensed operators only to ‘man’ the machines backed up by an effective monitoring system; the demand for skilled

Career Progression



*Figures indicate number of job roles

operators will rise exponentially.

Majority of the OEMs in India are global entities, who have set up high capex facilities and upgraded their existing ones to support both their Indian and international operations. Skilling people to operate and maintain these machines with the latest technologies in India are both a challenge and an opportunity.

While the industry is fully committed to the skilling eco system, the growing demand for operators and mechanics cannot be fully met by the OEMs alone. Hence, the need to set up additional training centres with world-class facilities to ensure quality skilling is delivered. Cost of setting up of such training centres is high, both in terms of capex and opex. Hence, government support is called for.

IESC MEMBERS

ACE, Ajax, Ammann India, Bonfiglioli Transmissions, Atlas Copco, CASE India, Caterpillar, Doosan, Escorts, Gates India, GMMCO, Herrenknecht, Hyundai Construction Equipment, Indus, JCB India, Kobelco, KYB Conmat, Larsen & Toubro, LeeBoy, LiuGong, Manitowoc, Mahindra & Mahindra, Propel, Puzzolana, Putzmeister, SANY, Sandvik, Schwing Stetter, SREI, Tata Hitachi, Terex, TIL, Voltas, Volvo, Wipro, Wirtgen Group

The industry has vast pool of experienced operators but not formally certified into the fold through the Recognition of Prior Learning (RPL) model. All the stakeholders, primarily the end-users through their apex bodies like Builders Association of India, Excavators Association of India, Crane Owners’ Association of India, Aerial Platform Association of India, Construction Equipment Rental Association, Sterlite Industries, L&T Construction – Transport & Infrastructure, to name a few, will be co-opted.

Recently, the IESC participated in the bauma CONEXPO INDIA 2018 held at Gurugram. All the days of the exhibition, IESC conducted interactive sessions with the user industry members like operators, mechanics, supervisors, owners etc, coupled with machine demonstrations to highlight the overall standards, safety etc. CEO from National Commission for the Certification of Crane Operators, USA interacted with crane manufactures, users etc, and presented case study/ best practices in the US and its benefits. The program was well received across the industry.

Impediments

In view of the high capex and opex involved in establishing and operating a training centre for training of

operators and mechanics on infrastructure equipment, other than OEMs, a few third-party/private organisations are willing to take it up due to financial viability.

Hence, currently most of this skilling is being carried out by the manufacturers (OEMs) both at their facilities and at sites while commissioning/installing the machines. However, this training is restricted to their own products and not scalable to meet the industry’s needs.

Since the cost of conducting skill programs on construction equipment is very high, the onus is on the equipment manufacturers (who are the major and most affected stakeholders in this) to support this initiative by firstly, expanding its in-house operator training schools and secondly, supporting private training organisations who have the passion to drive this change.

Looking ahead

The IESC has, over the past three years, established a strong foundation and framework for the skill eco system. Concurrently, the industry is also in the process of recovering from the recent slump and steadying itself for the projected growth in the coming years. The IESC is well poised to support in meeting the demands of skilled manpower in the sector.

