

AEGIS - the positive choice

AEGIS Engineering Systems has been serving the rail industry for two decades now and is currently in its 21st year. The company started from humble beginnings as a small consultancy, employing a handful of specialist engineers based in Huddersfield and focusing mainly on passenger rolling stock safety and reliability. It is now a flourishing company based on Pride Park in Derby. AEGIS currently employs 34 full-time employees as well as many associates and covers all areas of the railways including infrastructure, On-Track Machines (OTMs)/On-Track Plant (OTP) and plant.

New launch

This January saw the launch of AEGIS Certification Services, which was granted accreditation by UKAS to undertake work in accordance with BS EN ISO 17065: 2012 'Conformity assessment - requirements for bodies certifying products, processes and services'. In addition, the assessment and ultimate certification includes the scope of RIS-2700-RST for the 'Verification of conformity of engineering change to rail vehicles'.

Since the move to Derby in 2012, the growth has been steady and consistent, exceeding 30% year-on-year. AEGIS has expanded its range of services and its client base. Initially, continuing with the passenger rolling stock theme, but offering a wider range of services such as mechanical, electrical and structural rail vehicle engineering, supporting new build and refurbishment/modernisation projects.

It was whilst reviewing the annual railway safety reports that the AEGIS directors recognised that passenger rolling stock safety, the company's natural field of expertise, had reached consistently high levels, but that the industry was still struggling with safety at level crossings and with OTMs and OTP.

Mark McCool, Managing Director, AEGIS, picked up the phone and called a contact at Network Rail to offer the company's safety expertise in whatever format was needed. A few



weeks later, AEGIS commenced a new workstream, undertaking suitable and sufficient level crossing risk assessments for Network Rail and its clients. Since then, AEGIS Risk Assessments has been described by the ORR as 'exemplary'. With the increasingly demanding requirements of the rail network, and with pressure to run more and more services, level crossing assessments will continue to be a part of the AEGIS business going forward.

Diversification

Another area of natural diversification came with the support of the safety, approvals and certification of OTM/OTP. The first significant contract was to support Loram Maintenance of Way in its introduction of three new plain line rail grinders for use on Network Rail Managed Infrastructure. Since the Loram project, AEGIS continues to support other OTM/OTP projects in the UK and worldwide and this area of the business is set to grow even further over the coming years.

As well as new areas of work, AEGIS continues to grow in the safety arena. It was one of the first organisations accredited by Network Rail in 2002 as an Independent Safety



Assessor, a process that was later discontinued. AEGIS continued to undertake independent Assessment Body work for major vehicle builders and equipment suppliers in the interim period. In 2016, it was once again accredited - this time by UKAS under the BS EN ISO 17020 regime - as an Assessment Body (AsBo) for the 'Common safety methods regulation for risk evaluation and assessment'.

AEGIS is the AsBo for high-profile rolling stock projects such as Crossrail and London Overground trains. More recently, AEGIS has been involved with a variety of major refurbishment projects including several retraction projects for major equipment suppliers where it has assisted with compiling the safety case as well as performing AsBo duties.

In recent times, AEGIS has diversified further into work on major infrastructure projects with AEGIS assessors and certification managers playing significant roles in high-profile projects such as the Ordsall Chord, Birmingham Gateway and Manchester Metro Phase 3. AEGIS sees the infrastructure market as a huge opportunity and, in November, appointed Martin Westerman as

its Head of Infrastructure. Martin's role is to help grow the infrastructure business over the next three years into a sustainable and significant part of the AEGIS offering.

Worldwide clients

As well as diversifying the service offerings and customer base, AEGIS is becoming a company with a global reach. The company currently has clients from the USA to Germany and Japan and is working on projects in Dubai, Singapore and Vietnam. Its overseas work is set to expand as it looks to export its engineering excellence.

Key factors in AEGIS' success include:

- Rapid mobilisation.
- Experienced employees.
- Flexibility.
- Pragmatic solutions.
- Customer focused.

The company undertakes work in the following key sectors:

- Passenger rolling stock.
- Infrastructure.
- On-track plant and machines.
- Freight.
- Signalling.



The key services where AEGIS offers expertise are:

Engineering:

- Project engineering.
- Project management.
- Structural engineering.

Assurance:

- Standards compliance.
- Software assessment.

Compatibility:

- Gauging.
- EECS and EMC.
- Vehicle performance.
- Electrification.

Reliability, Availability, Maintainability and Safety (RAMS):

- Safety management.
- Common safety method.
- RAM management and engineering.

Independent Services:

- Independent Safety Assessor.
- Assessment Body (AsBo).
- Independent Competent Person.
- Notified Body (NoBo).
- Designated Body (DeBo).
- Plant Assessment Body (PAB).
- RIS-2700-RST.

The next engineers

As AEGIS grows as an organisation, it believes that it has an obligation to assist the industry in bringing through the next generation of talented engineers. Of its 34 current employees, five joined AEGIS within 18 months of completing their studies.

'As we grow, it is vitally important that AEGIS contributes to developing the next generation, but we realised early on that we would have a challenge attracting the best engineers unless we could offer them a pathway to becoming Chartered,' said Chris Hoare, Engineering Director. 'This is why we engaged with the Institution of Mechanical Engineers (IMechE) to create our own developing engineer scheme. The scheme was registered and recognised by the IMechE in 2017 and we have recently received formal accreditation of the scheme.'

As well as the developing engineer scheme, AEGIS supports those graduates who wish to continue their studies to MSc level and beyond. AEGIS is also helping talented undergraduates with engineering work placements with either summer placements or work placements as part of their degrees.

What next?

So, what does the future hold? 'Well, we will continue to support and delight our existing customers,' said Mark. 'Our growth plans include expanding our current offerings beyond the existing customer base, but also to grow into new areas like Infrastructure. And then there is the overseas market. But, most importantly, we will continue to live our values and create a working environment that is stimulating, exciting and focused on delivering excellence with the objective of making AEGIS the positive choice for your rail consultancy needs.'

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