

## Quality and Expediting Services

*Independent, expert services supporting those manufacturing plant off-shore*

### Challenges

Limited Australian-based capacity for manufacturing high-pressure high-temperature equipment – such as that required in thermal power stations and processing plants – often forces the owners and operators of those plants to turn to overseas manufacturers.

A potential low-cost option – especially from Asian - based suppliers – overseas manufacturing comes with challenges.

Such challenges can include:

- confidence in manufacturer's Quality Management System, their capabilities and capacity
- understanding of procurement requirements and design specifications to ensure compliance with Australian standards, and statutory and regulatory requirements
- plant owner/operator's presence during design, manufacturing, packaging and shipping of plant.

### Solutions

HRL provides a comprehensive range of independent, specialist services that address the specific challenges Australian-based companies face when purchasing high-pressure high-temperature equipment from offshore suppliers. The HRL team that provides the services includes professionals with comprehensive expertise in quality assurance and control, project management, mechanical engineering, metallurgy, materials and chemical engineering.

By using the experienced independent services offered by HRL companies can manage and control the quality of the plant they purchase. Control commences with verifying plant design, and continues through the procurement chain to ensure what is specified is delivered in compliance with Australian Standards and other statutory and regulatory requirements.

The comprehensive range of independent specialist services HRL provides includes:



HRL provides quality assurance and expediting services

### Quality services

Quality Assurance:

Reviewing of quality assurance documentation, such as: Quality plans, inspection and test plans, manufacturing data reports, etc

Supplier evaluation:

Assessment of potential plant suppliers including: Quality management systems, capacity and workload, resources and capabilities, document control, materials traceability, control of nonconforming products, etc

Quality control:

Providing independent expert inspections at each critical stage including:

- Preproduction – raw materials or components, patterns/mould
- Production – first products out of the manufacturing process or any of its stages
- Pre-shipment – quality, where final inspection services are required
- Loading – ensuring packaging/loading plans are adhered to, and the right quantity is shipped.

**HRL Technology Group Pty Ltd**  
ABN 89 609 887 327  
info@hrl.com.au  
hrl.com.au

**Melbourne**  
Level One Unit 4  
677 Springvale Road  
Mulgrave VIC 3170  
Phone +613 9565 9888  
Fax +613 9565 9879

**Victorian Regional Office**  
Gippsland Enterprise Centre  
50 Northways Road  
Churchill VIC 3842  
Phone +61 3 5132 1500  
Fax +61 3 5132 1580

**Queensland**  
Unit 2  
33-37 Rosedale Street  
Coopers Plains QLD 4108  
Phone +61 7 3423 4300  
Fax +61 7 3345 5937

## Expediting services

Independent monitoring and supervision to ensure contract requirements are met including specified quality and schedule. Specific services include:

- reviewing all project documentation
- providing quality assurance and other documentation required to meet quality, regulatory and statutory standards
- monitoring/scheduling work progress
- overseeing daily work to ensure specifications are met
- assessing delivery schedules
- preparing progress reports.

## Benefits

By using HRL to support the fabrication of plant off-shore, clients enjoy peace of mind. They know the equipment they receive will represent cost-effective procurement, at the required quality, and be delivered on schedule.

HRL engineers support clients through their involvement in verifying plant design, identifying local materials that meet Australian specifications, determining inspections and test requirements, verifying materials and non-destructive testing, factory acceptance testing and progress reporting.

## Case Study

### Manufacturing dry-bottom ash-handling systems in China

A Western Australian power station involved HRL in the design, manufacture and supply of two systems for safe handling of bottom ash.

Once the client approved the system design, HRL personnel prepared a quality plan – which included inspections, test plans, and manufacturer data reports – to ensure that system component complied with Australian Standards and the client's rigorous quality requirements.

Several HRL engineers were deployed to manufacturing facilities in China. Through planning, daily surveillance and constant communication they identified any manufacturing issue with the potential to have a negative impact on product quality.

The two units HRL delivered on time met Australian Standards and specified quality requirements.

## Case Study

### Assessing a China-based manufacturer of cast-steel bogies

A client wished to determine if a China-based manufacturer of cast-steel bogies had the skills, commitment to quality, and capacity to become a recommended supplier.

HRL was retained to audit the manufacturer's Quality Management System, with particular emphasis on:

- control of records and document control
- resources and capabilities
- ability to trace materials
- control of non-conforming products; as well as
- capacity and workload

The audit revealed the manufacturer has a robust quality management system with good document control and materials traceability. Resources training records indicated capable and skilled personnel. Capacity and workload were to be discussed at order placement as the manufacturer had commitments to fulfil order from America.

Non-conforming products are identified, isolated and repaired as per weld-repair procedure. Weld repairs were X-rayed to confirm quality. A weld repair map was produced.

Given the audit results, HRL recommended that the client place the cast steel bogies manufacturer on their recommended supplier list.

#### Contact

Chris Patterson

Telephone +61 3 9565 9816

Mobile +417 913 558

Email [cpatterson@hrl.com.au](mailto:cpatterson@hrl.com.au)

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The company's NATA Accredited Laboratories number is 561.

HRL Technology Group's ISO 9001 Quality Management is certified by BSI under certificate FS605116

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