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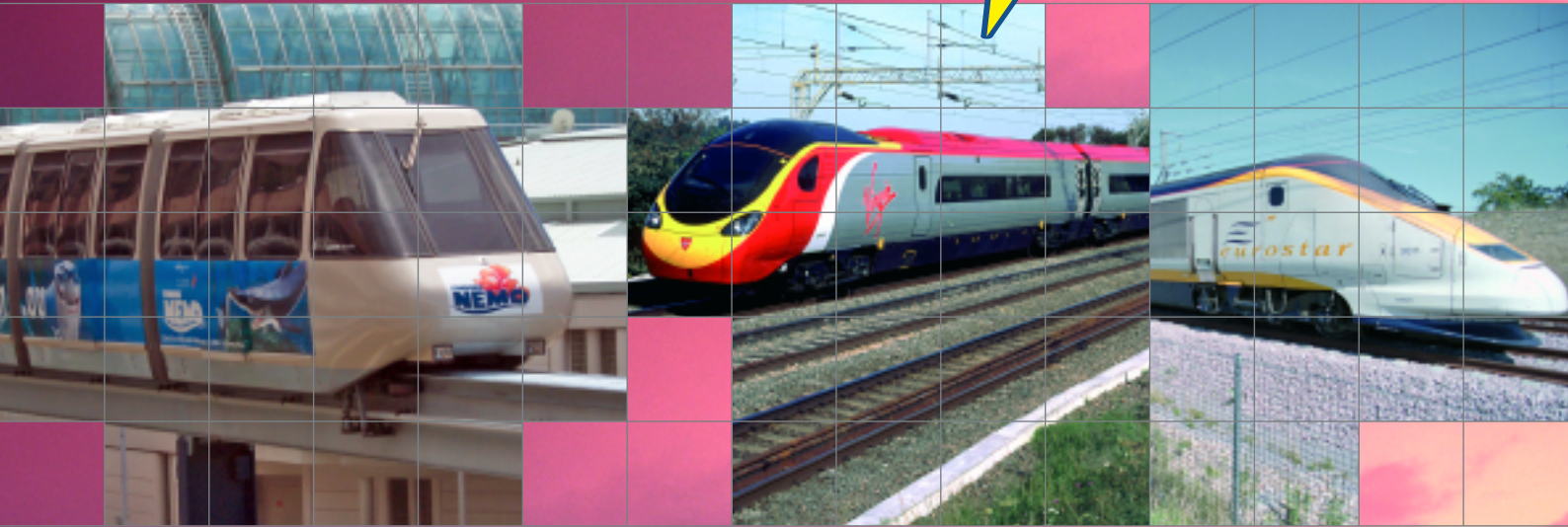
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OFFICES IN:

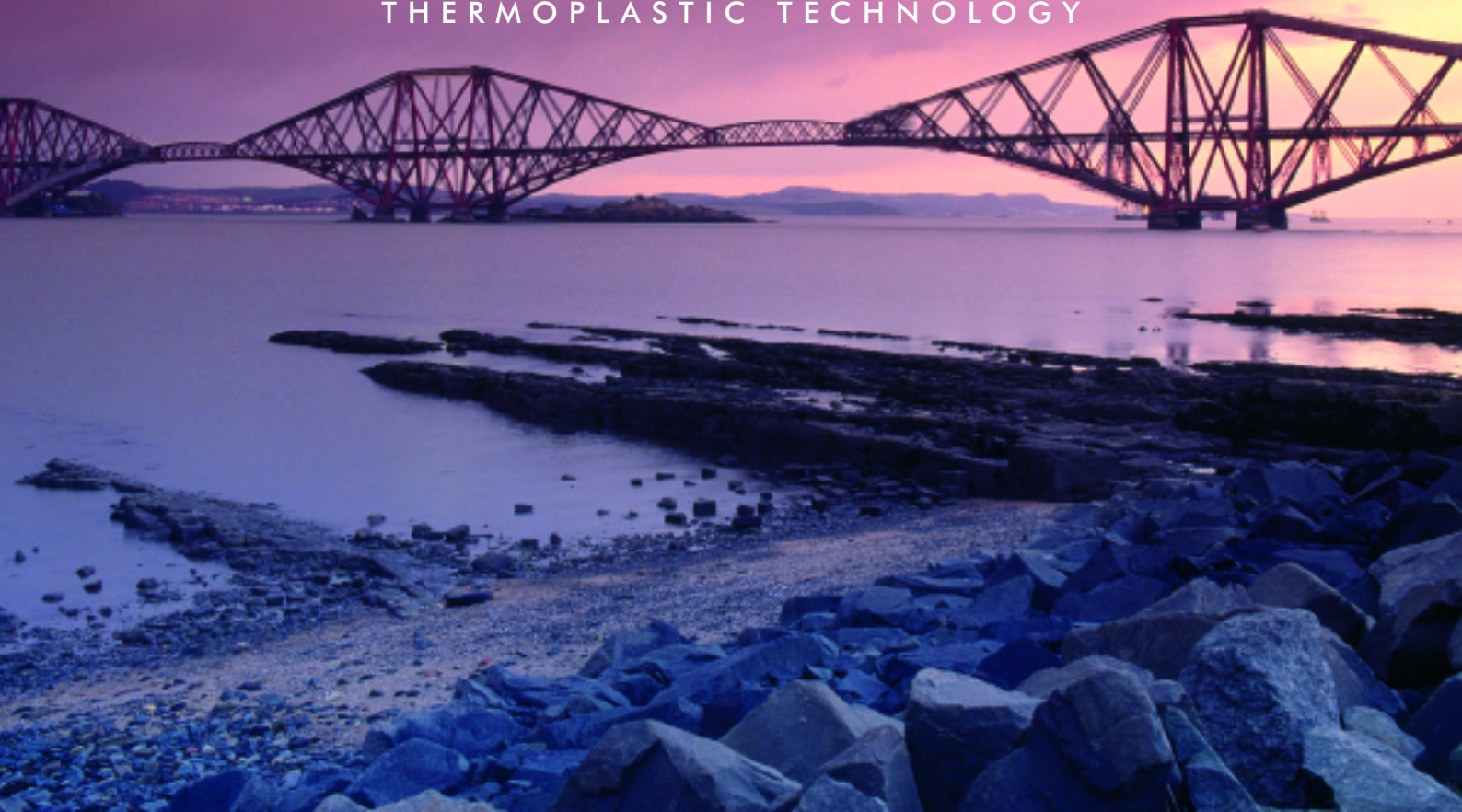
EUROPE • USA • SOUTH AFRICA • AUSTRALIA

Devol®



PIONEERING

THERMOPLASTIC TECHNOLOGY



The components produced by Devol directly replace and improve upon the performance levels offered by:

- Bronze
- Brass
- Hardened steel
- Laminates
- Incorrectly specified low performance plastics

DEVLON:

- Increases component life
- Extends life of mating parts
- Increases service intervals
- Is cost effective
- Does not require special fitting tools
- Is lightweight and easy handling

Devol Engineering Limited

world pioneers in the design, development and manufacture of advanced thermoplastics.



Devol Engineering are pioneers in the design and manufacture of thermoplastic materials and components for the rail industry.

We continually innovate in industries throughout the world by identifying that the customer should be given what they need and not what industry dictates. Having built a strong and honourable reputation over the years, Devol's creativity in working with engineers and designers in pioneering synthetics in the rail sector has brought about a paradigm shift in the way the industry operates. Devol has helped our customers pioneer and stay ahead of the competition whilst still holding true to their values.

Devlon, the range of materials exclusive to the company, is a range of the toughest and most resilient thermoplastics available, providing a comprehensive range of wear resistant and impact strength properties.

Because the components produced by Devol are of a safety critical nature, Devlon meets and fulfils all the rail safety group standards, risk and performance issues associated with safety critical applications.

In addition to manufacturing superior components, we pride ourselves on our exclusive "idea to innovation" service. Working in tandem with clients, Devol provide unique solutions to engineering problems, combining technical expertise, project management and state of the art equipment to offer optimal solutions to difficult application problems.



D E S I G N E D T O P E R F O R M - E N G I N E E R E D T O L A S T

BRAKING SYSTEMS

PASSENGER & FREIGHT VEHICLES

APPLICATIONS

- Tread brake bushes
- Disc brake bushes
- Actuator bushes
- Calliper bushes
- Linkage bushes

ADVANTAGES

- Directly interchangeable with existing components – replaces inferior bronze, steel and thermosett materials with no need to alter housings or pins
- Increased brake efficiency due to significantly reduced seizure in brakes
- Vastly reduced pin and housing wear when compared to steel bushes
- 87% reduction in seizure compared to hardened steel and sintered iron
- Quick and easy to install



*'However challenging the project,
we can provide the skills and
expertise to meet it'*

Stuart Dalrymple - Managing Director

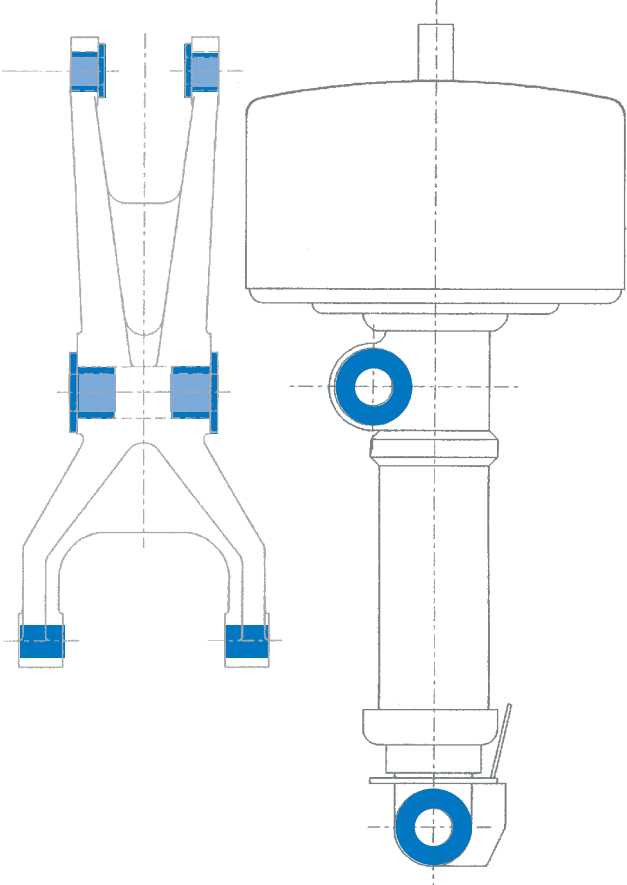
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- 1. Tread brake
- 2. Brake actuator
- 3. Freight locomotive
- 4. Disc brake



DESIGNED TO PERFORM - ENGINEERED TO LAST

BOGIES

PASSENGER & FREIGHT VEHICLES

APPLICATIONS

- Centre pivot liners
- Anti-roll bar bearings
- Spherical bearings
- Horn block guide wear pads
- Torsion bar bearings
- Suspension damper wear pads & bushes
- Traction centre wear pads

ADVANTAGES

- Increased part life and extended service intervals
- Materials withstand hostile environments
- Significant cost savings
- Coefficient of friction which supports vehicle dynamics
- High load bearing capability
- May be specified for dry running applications where lubrication is not possible

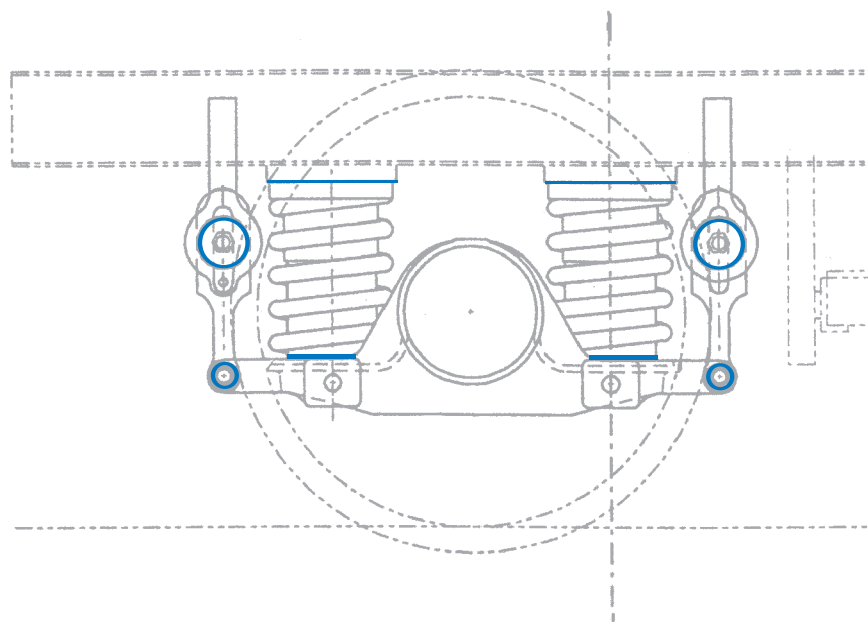
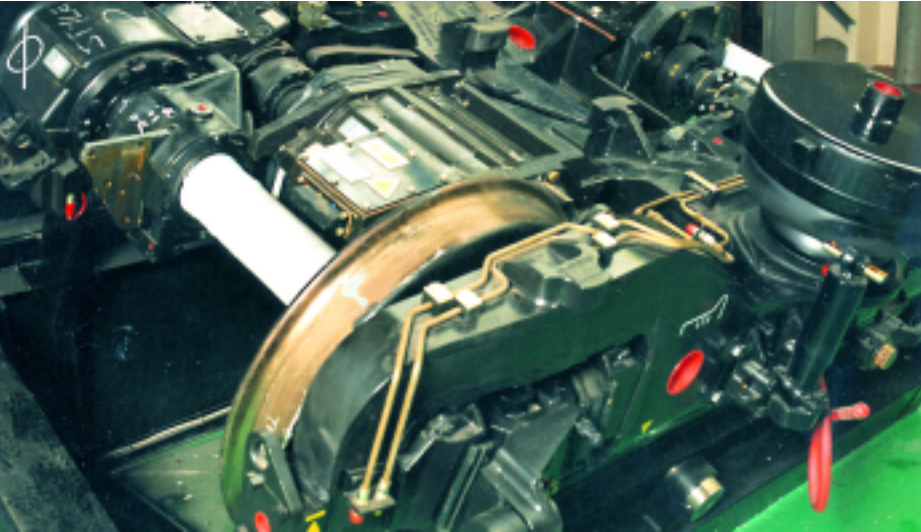


*'Our focus is simple:
To meet your needs and budget on
specification and on time,
every time.'*

Graham Adair - Technical Sales

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1. Freight wagon
2. Bogie
3. Devlon pivot liner



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WAGON/COACH MOUNTED COMPONENTS

APPLICATIONS

- Hopper liners
- Gangway fascia wear plates
- Door system runners and bearings
- Wear liners
- Coupler support gear wear pads
- Discharge door pivot bushes

ADVANTAGES

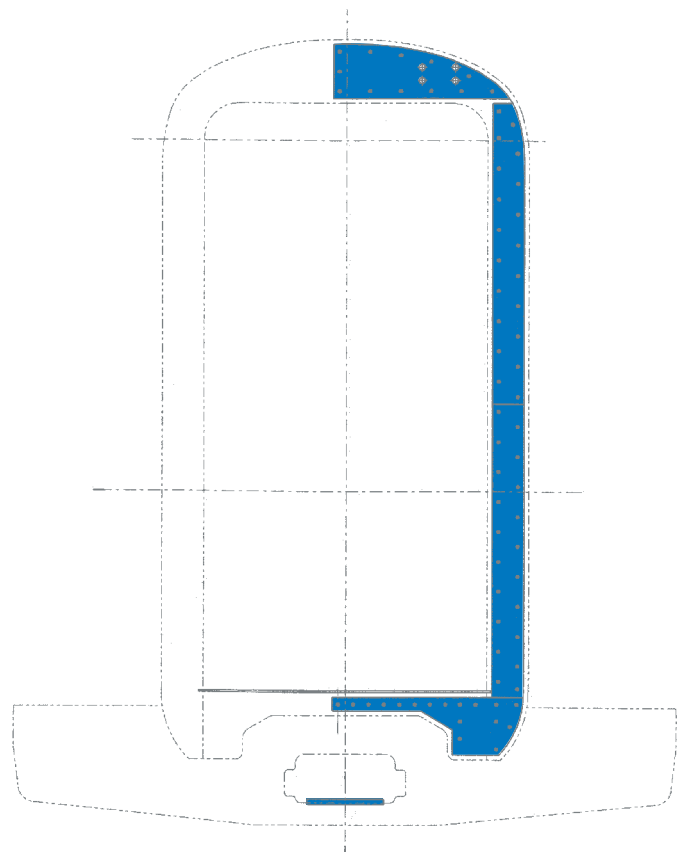
- Low friction gives outstanding wear results
- Robust and impact resistant
- Replaces costly and difficult to install metal parts
- Exceptional abrasion resistance
- Lightweight and corrosion free
- Solved previous seizure problems when replacing steel



'We don't subcontract - we maintain our own skills base of professional staff who are trained to the highest standards. People you can trust.'

Graham Stark - Operations

2. 3.



1. Pivot bushes on freight wagon
2. Passenger train
3. Coupler wear pads



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CERTIFICATION

Devlon meets all key areas of concern in safety critical applications and fulfils all the safety group standards associated with the modern railway industry.

A certification company was contracted to carry out testing and evaluation of Devlon in over 350 different applications ranging from disc and tread brake pivots to suspension components and gangway fascias. Devlon outperformed the traditional materials such as hardened steel, sintered iron and thermosetting plastics, in some cases by over 87%.

Standards met include;

- Operating environment (temperature range -100°C to $+200^{\circ}\text{C}$)
- Exposure to contamination (water, effluent, salt spray, greases, hydraulic fluids, fuel oil, coolants etc.)
- Safety compliances (toxicity, oxygen indexing, flammability etc)



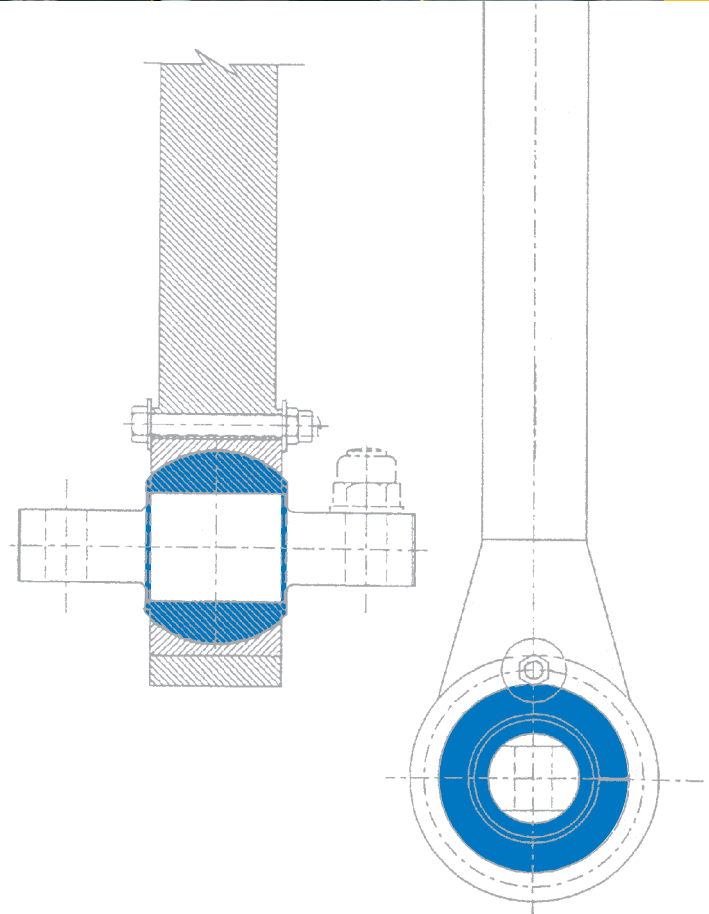
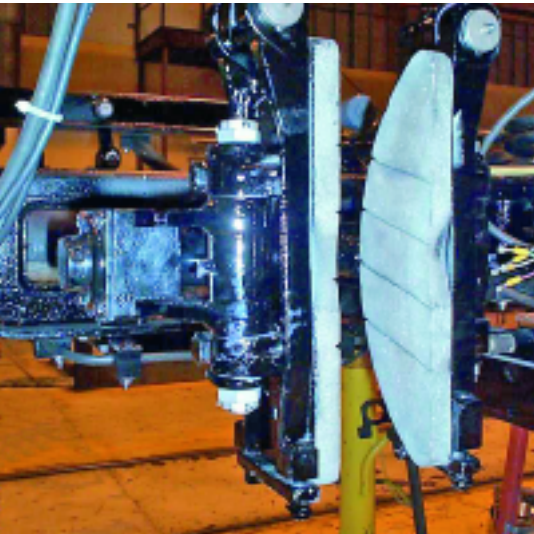
'Devol operates a process-based management system certified to ISO9001:2000'

Neil Hendry - QA

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1. Safety is critical
2. Tread brake test rig
3. QR coach (courtesy of Queensland Rail)
4. Tread brake test rig



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