



Global Thermal Processing
Jan Elwart

Midlands Tour
May 2006

Bodycote

We will show you that...

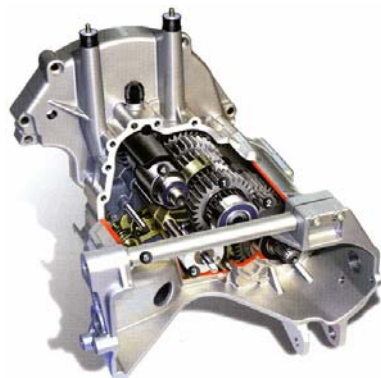
-Bodycote is well structured
-Bodycote is global
-Bodycote is innovative
-Bodycote is partnering and integrating
-Bodycote is developing and growing
-Bodycote is investing carefully

...but why in Thermal Processing?

→ Because essential parts of our lives won't work without it!



Gearbox



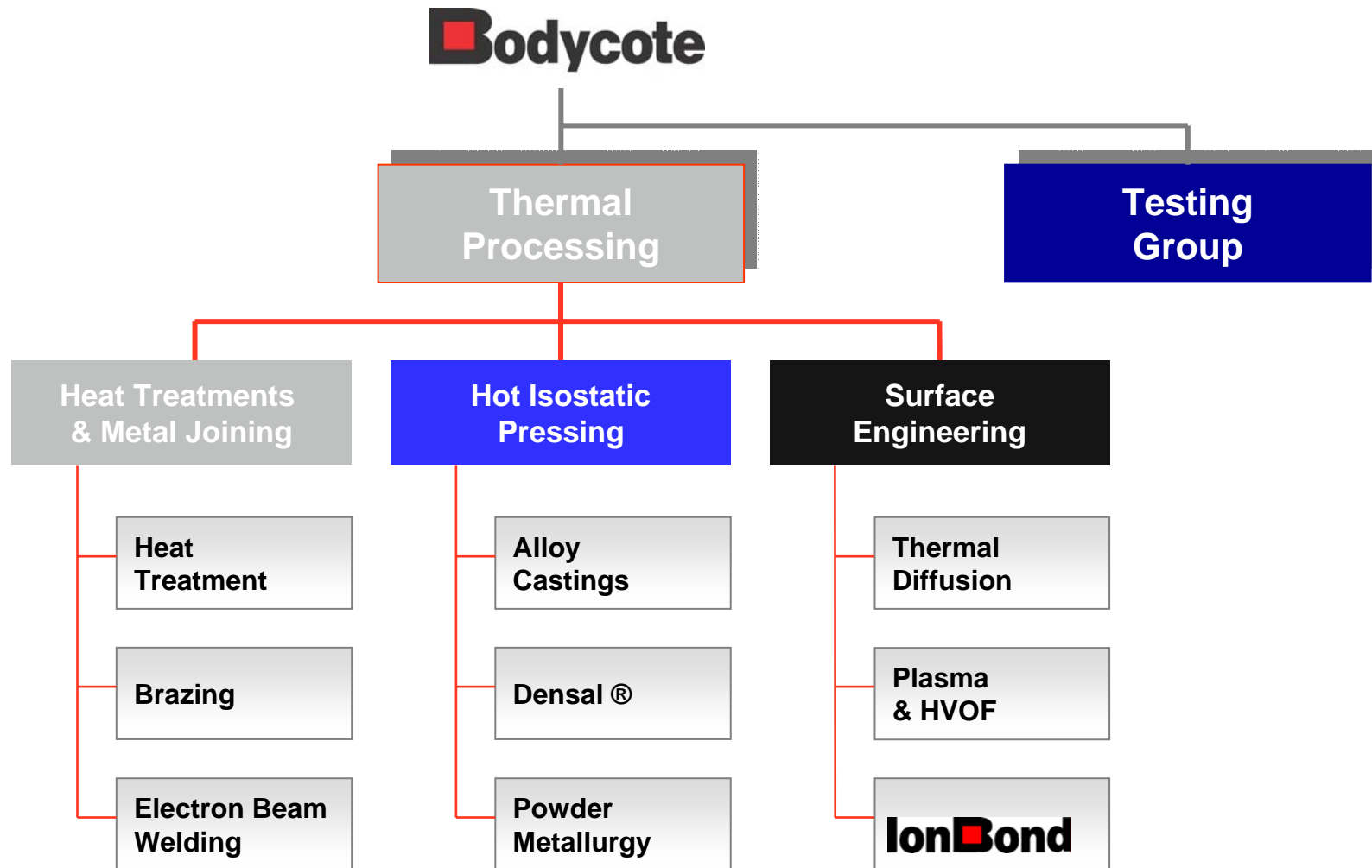
Surgical instruments



Turbines

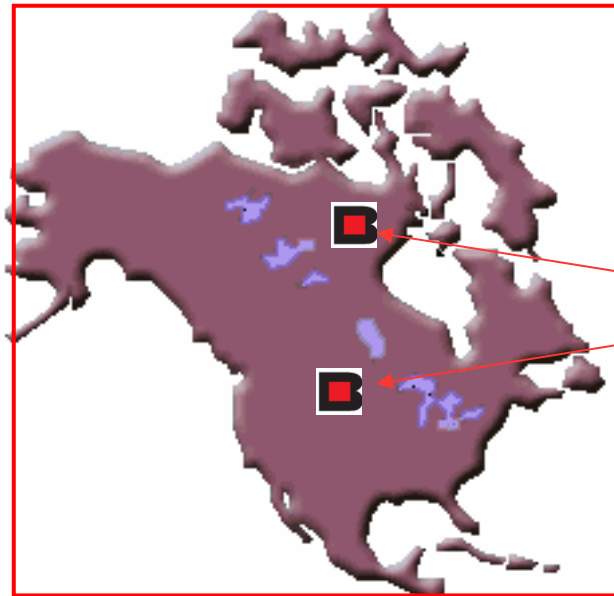


Group Structure



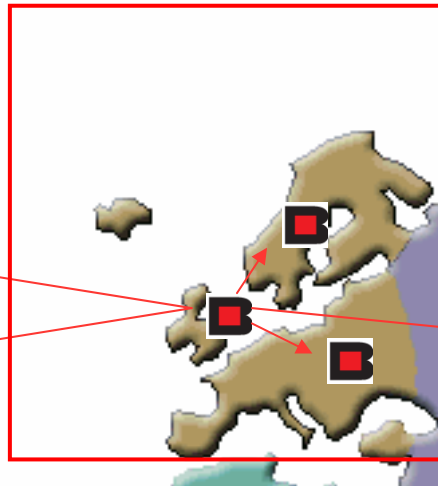
Geographic Structure

AMERICAS



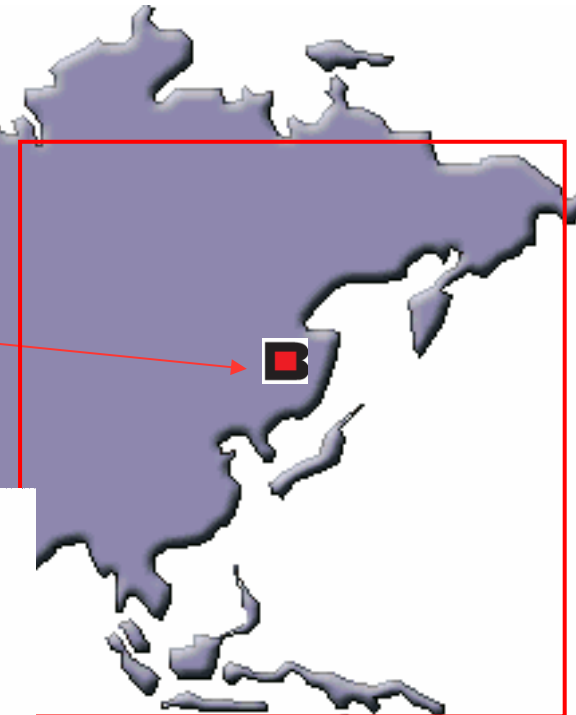
North America :
Canada: 2 plants
US: 44 plants

EUROPE



Europe:
UK: 25 plants
Germany: 18 plants
Netherlands : 5 plants
Austria: 3 plants
Switzerland: 2 plants
Italy: 4 plants
Liechtenstein: 1 plant
Czech: 6 plants
Poland: 5 plants
Romania: 1 plant
Hungary: 1 plant
France: 32 plants
Belgium: 3 plants
Sweden: 13 plants
Finland: 6 plants
Denmark: 2 plants

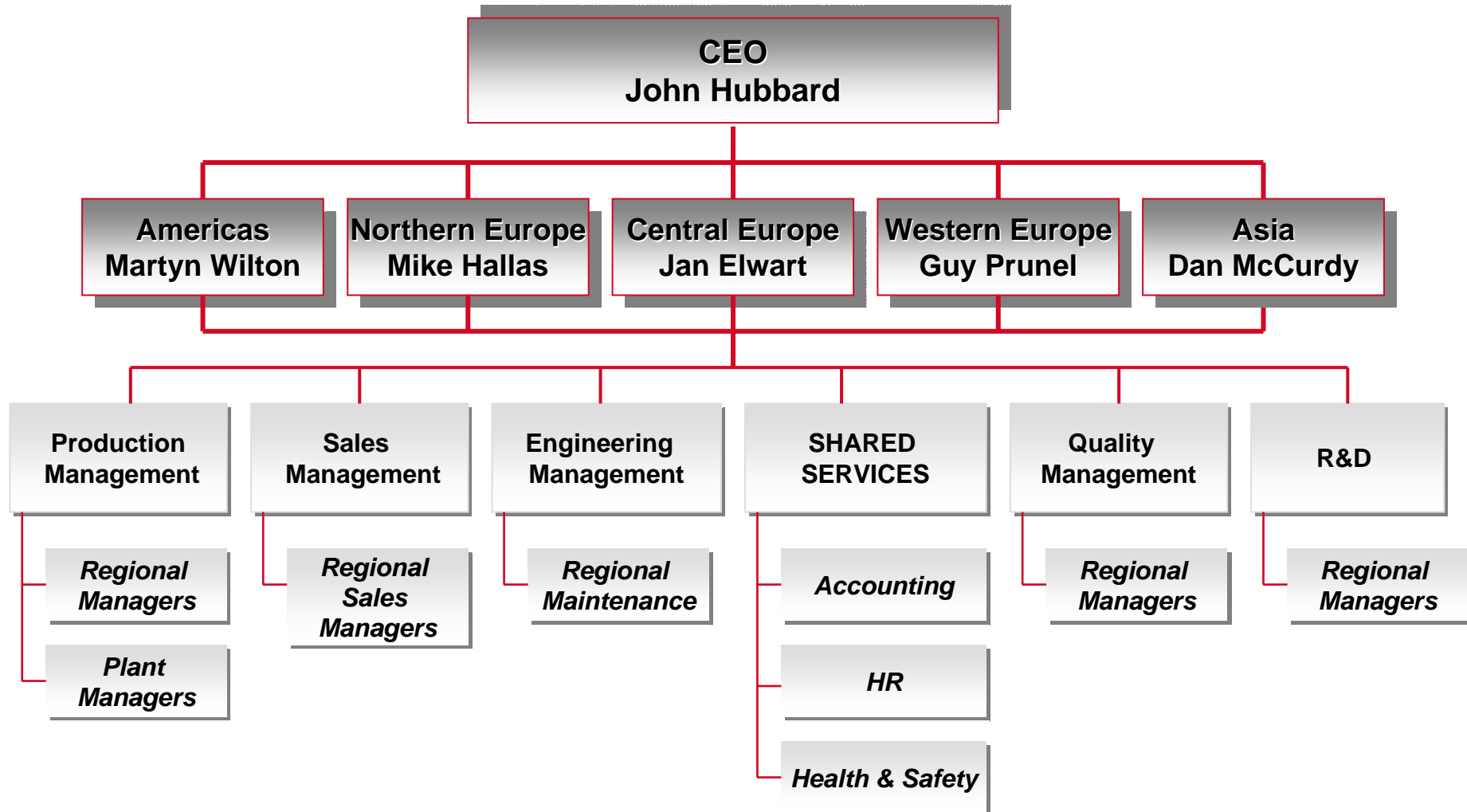
ASIA



Asia:
China : 1 plant

Management Structure

...experienced management team

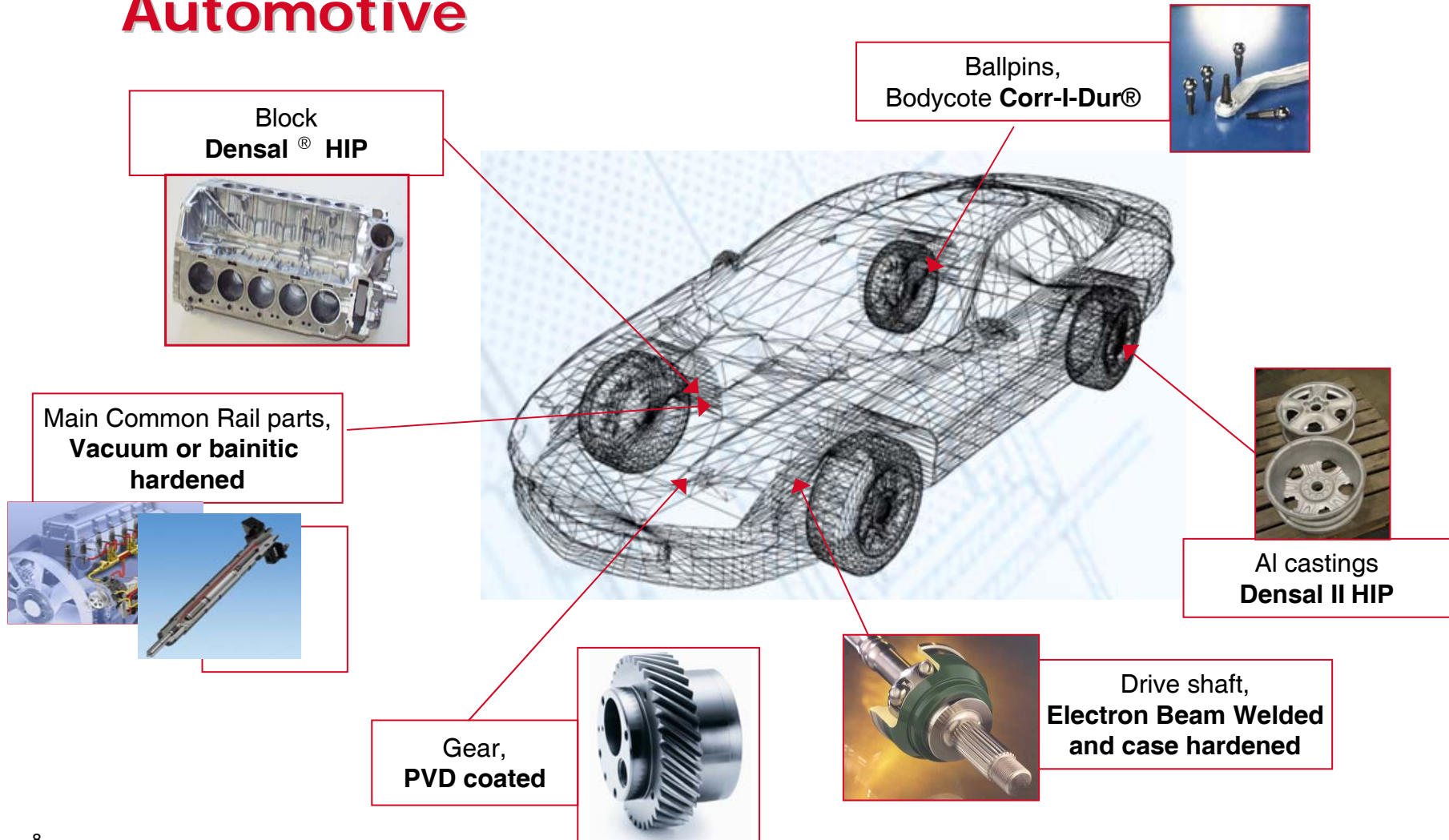


Thermal Processing Markets

Division	Technology	Industries Served
<p style="text-align: center;">Heat Treatments</p>	<ul style="list-style-type: none"> ▪ Annealing ▪ Carbonitriding ▪ Case Hardening ▪ Controlled Atmosphere Treatments ▪ Electron Beam Welding ▪ Gas, Plasma & Liquid Nitriding ▪ Hardening & Tempering ▪ Induction Heat Treatment ▪ Kolsterising® ▪ Low Pressure Carburising (LPC) ▪ Nitrocarburising ▪ Vacuum Brazing ▪ Vacuum Heat Treatment 	 <ul style="list-style-type: none"> ▪ Automotive ▪ Aerospace & Defense ▪ Construction ▪ Tooling ▪ Oil & Gas ▪ Power Generation ▪ Medical technology ▪ Foundry ▪ Miscellaneous
<p style="text-align: center;">HIP</p>	<ul style="list-style-type: none"> ▪ Alloy Castings ▪ Densal® ▪ Powder Metallurgy ▪ Composites 	
<p style="text-align: center;">Surface Engineering</p>	<ul style="list-style-type: none"> ▪ CoatAlloy® ▪ Sheradizing ▪ Plasma spraying ▪ HVOF ▪ IonBond 	

Markets Thermal Processing serve

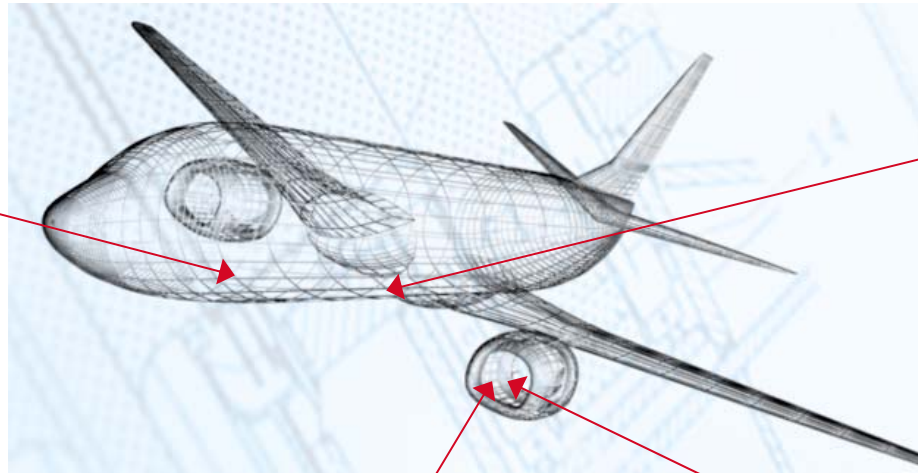
Automotive



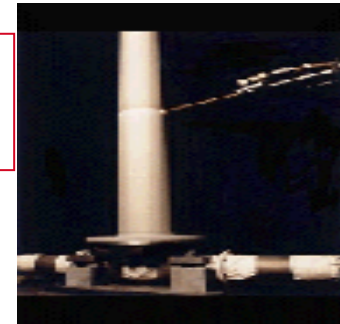
Aerospace



Hipped MMC component



Landing gear arm, plasma coated to replace Cr plate.



Vane assembly, vacuum brazed, and heat treated



Fluid tube, vacuum brazed, and heat treated



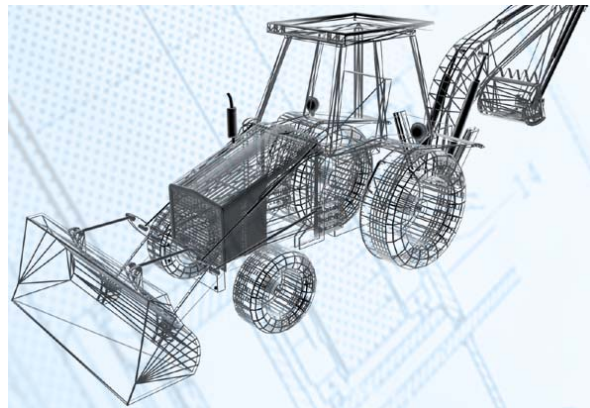
Markets Thermal Processing serve



Construction



Sherardized fittings
For tunnel projects



Heat treated steering gear



Piston pins and Tappet roller for Marine Diesel
Carburised



Other industries

- Power generation
- Medical & Pharmaceutical
- Food & Beverage
- Petrochemical
- Consumer products

TEGIMENT®
Kolsterising®
Watch industry

Teeth clamp
Vacuum brazing



Bodycote Core Competence

Technology



- Best technology
- Highest global quality standard
- International know-how transfer

Service



- Wide spectrum
- Integrated Solution

Partnership



- Cost saving for customer
- Time saving for customer
- Value added service
- Flexibility

Human Resource



- Experienced management team
- Trained staff

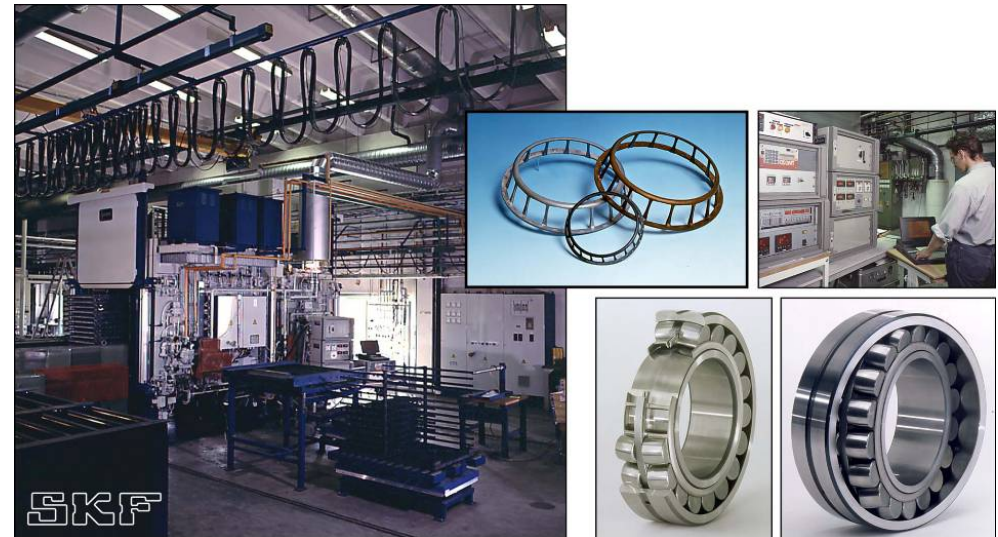


International companies need global partners

Outsource – for SKF



- Joint development with SKF
- New technology treatment
- High volume bearing production
- Best mechanical and aesthetic properties
- Optimum logistics



Outsource – for Continental



- > Inhouse solution
- > Corr-I-Dur[®] on break pistons
- > Patent Pending
- > 15 million break pistons /year
- > Weight Reduction, change material from cast iron to sheet steel – 25% weight reduction
- > Substitution of chrome plating
- > Environmental friendly process



Outsource – for Koppern

- Crusher rolls for cement production
- Hipped tool steel tiles for wear resistance
- Tiles fitted to a roller and hipped in place using a softer in-fill material to produce an impact resistant compound structure
- Replaces welded hard faced rollers and increases life expectancy by more than 500%



Bodycote



and











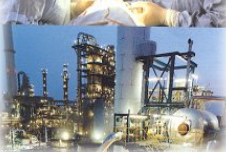



Bodycote

- New Technology
- Metallic coating enhances productivity of reactor tubes in petrochemical plant.
 - Increases Flow Rate by over 15%
 - Extends period between de-coking by up to 200%
 - Improves Tube Life to 5 years



Market trends/Growth potential

- By Industry

Industries	Trends	Applications
Automotive	 	Fuel Injection System, Powertrains, Carbody protection, Fuel Cells
Construction	 	Components for machinery and highly abrasive tooling
Aerospace	 	Turbines, Landing structures, Space and Aeronautic components, Turbine Overhaul
Medical	 	Implants, surgical Instruments, pharmaceutical and chemical industrie components
Oil & Gas	 	Drill, transfer, distribution and developing mashinery
Power Generation	 	Turbine components



Outsourcing initiatives continue to deliver growth
Confident of further progress in 2006

Market trends/Growth potential

- By Region



Eastern Europe:

- Poland
- Czech
- Romania
- Hungary
- Turkey

Asia:

- China
- India
- Malaysia
- Singapore
- Japan
- Taiwan

South America:

- Brazil

Market trends/Growth potential

Eastern Europe



- Automotive industry grows fast in eastern Europe
- Aerospace industry in Poland

Source: automotive news

Market trends/Growth potential

Asia

India



China

Source: automotive news



Singapore



- Boom of automotive market in India and China
- Singapore is centre of asian aerospace industry

Market trends/Growth potential

South America - Brazil



Brazil is the main automotive manufacturing location in South America.

→ FOCUS: Outsourcing for Industry

Future target markets:

- ✓ Go East!
 - Asia (China, India, Singapore)
 - Eastern Europe (Poland, Czech, Turkey)
- ✓ South America
 - Brazil

Strategy:

- ✓ Further bolt on Acquisitions
- ✓ Relocation of equipment
- ✓ Optimizing plant size
- ✓ Divest or realign underperforming locations
- ✓ Value added service

Summary - Thermal Processing



- Growth through outsourcing with a focus on high added value components and medium/large national/multinational customers
- Expand the network in lower cost economies –
Eastern Europe, Asia, South America
via bolt-on acquisitions and selective greenfield locations
- Acquisition of bolt-on specialist processing NA/Europe
- Realign, close or dispose of underperforming and commodity orientated facilities
- Transfer skills and know-how around the Group
- Focus on ROCE - not growth for growth's sake



Bodycote