

## 3.3 SELECTED GFC THYSSEN PROJECTS

The German Frigate Consortium (GFC), whose obligation is to be offset by Thyssen Rheinstahl Technik (TRT), a member of the consortium, won the bid to supply the SANavy with corvette platforms. Their IP projects put forward are very diverse and many focus on their core competencies, that of metal beneficiation. However, TRT is part of a group that has many divisions that specialise in various different industries and they have used them to identify opportunities in South Africa. Two such projects that have started and are bearing fruit are the Alltube and Ferrochrome projects situated in Kwazulu Natal and North West Province respectively.

### 3.3.1 Alltube

This project is one of the first greenfield projects undertaken as part of Industrial Participation fulfilment by Thyssen. It relates to the manufacture of aluminium tubes for the automotive industry. The component manufacturers for radiators in the SA automotive industry are currently importing aluminium tubes that are used in the manufacture of radiators. The company Alltube now produces aluminium tubes for this application. First production started in November 2001. This project has led to increased competitiveness of the local manufacturers, import replacement and opportunities for export.

The factory required an investment of US\$2.9 million and has projected sales of about US\$35 million over the next five years. It is expected to generate approximately 21 jobs at full production. The plant is situated in Campsdrift, next to the new Hulett Aluminium factory, in Kwazulu Natal Province and has a capacity to produce 400 tons of aluminium per year.



*Hightech equipment used in the manufacturer of aluminium tubes*

The company, Alltube, has a BEE partner in the form of Ennovative Solutions. Alltube is training welders in co-operation with a German government programme to increase the job opportunities of apprentices. Some of the courses have already been completed successfully. The company is considering exporting as well as a new production line to meet the demand.

# Ferrochrome

## 3.3.2 Ferrochrome

The Ferrochrome smelter project involves the processing of high-grade and low-grade chrome ore into ferrochrome that is used in stainless steel production and other downstream activities. The smelter is operated by SA Ferrochrome, a subsidiary of SA Chrome of which the major shareholders are Royal Bafokeng Nation, the IDC, Bateman, Outokumpo and Thyssen Krupp Met. The Royal Bafokeng Nation holds the rights to the chrome reserves. Thyssen signed an off-take agreement with SA Ferrochrome.



*Furnace at SA chrome facility*

The smelter consists of two 54MVA closed submerged arc furnaces with charge preheating, each furnace producing 120 000 tonnes per annum, and a 520 000 tonnes per annum pelletiser and sintering plant, based on Outokumpu technology. The smelter is environmentally friendly, using the latest closed furnace technology. The advantages of this technology include higher chrome recoveries, environmental issues and lower electricity costs.

A third furnace is being considered, which will create opportunities for downstream projects, including conversion of steam to support steam-intensive industries such as laundries and bakeries, production of high chrome steel balls and castings, etc. A feasibility study is being undertaken and it is expected that an investment of about R180 million would be required to implement the downstream activities.



*Chrome running out of furnace into forms*

# BAE/SAAB PROJECTS

## 3.4 SELECTED BAE/SAAB PROJECTS

The South African National Industrial Participation (SANIP) company of BAE/SAAB has launched 27 projects. The projects are spread across a number of sectors ranging from mining beneficiation to manufacture of environmentally friendly energy products for export markets. Geographically, the projects cover most of the provinces and are spread in various cities throughout the provinces. A highlight of some projects is given below.

The geographic spread of SAAB/BAE SYSTEMS implemented projects is as follows (please note that some companies have more than one factory, so the number of locations will be greater than the number of implemented projects):

Gauteng cities:	8	Gauteng rural:	2
KwaZulu-Natal cities:	7	KwaZulu-Natal rural:	3
Eastern Cape cities:	3	Eastern Cape rural:	1
Western Cape cities:	2	Western Cape rural:	1
North West rural:	2		
Free State rural:	2		
Mpumalanga rural:	1		

### 3.4.1 Gold Beneficiation projects

SANIP has been working closely with Harmony for nearly three years to develop a gold beneficiation strategy to assist Harmony in its vision of establishing a profitable value-added downstream industry for gold, including development of specialised skills and technologies and to position itself as an innovative gold producer in the global precious metals industry. The strategy is based on developing Harmony's capacity to develop new products, access new markets and create a Harmony 'brand' in order to increase market share and grow its business.



Gold Beneficiation

The overall strategy includes a new refinery, various Harmony-owned manufacturing projects, technology development, a dedicated jewellery

Industry school and downstream joint venture projects that will manufacture finished jewellery for export.

BAE SYSTEMS has funded (US\$1 million) a technology programme through Mintek, the South African Mining and Minerals Technology organisation in order to identify new technologies for Harmony to commercialise in the medium-term in order to develop new products or achieve increased price premiums. Technologies under development or evaluation include, new alloys, electronics products and manufacturing processes including powder metallurgy.

**The Harmony Jewellery School** is currently training 20 students in jewellery design and manufacturing. BAE SYSTEMS is supporting the development of the jewellery

school (funding of US\$400k,) through the purchase of capital equipment and a bursary scheme in order to fulfill demand for design and manufacturing skills in Virginia, which will be created by new jewellery manufacturing projects.



*Production process for gold chain manufacturing*

Both the Mintek Technology programme and the Harmony Jewellery School are seen as securing the long-term future of the gold beneficiation industry in South Africa.

**South African Royal Manufacturing (SARM)** is a new jewellery manufacturing facility in Virginia, Free State, established with international partners and with the support of the IDC, Harmony and SANIP. BAE SYSTEMS has provided a loan facility to SARM for use as working capital in order to maximise the production and export of jewellery products.

SARM will produce hand-made rope chain mainly for North American markets and will eventually use up to 400kg of gold per month. Initially marketing of product is likely to be through US-based or Canada-based jewellery wholesalers and is likely to achieve a modest premium in order to maximise volumes, build market share and start to develop a good reputation for South African produced products in new markets. In the longer-term large retail markets will also be targeted and will achieve higher premiums but for smaller volumes of product. It is anticipated that SARM will export US\$37 million of jewellery products by April 2004 and more than US\$ 350 million by April 2011.

Currently SARM is training 500 new employees and have started to manufacture products for marketing purposes. Manufacturing of rope chain by hand is labour intensive and SARM will eventually employ 1000 people, mainly rural women, in its operations.

# Other Projects

## 3.4.2 Other projects

Five of the implemented projects (Bel-Mec, Dunlop, Kolbenco, UDE and Volvo) are in the automotive sector, supporting the government's drive to stimulate and develop this important sector of the South African economy while a tourism project has been successfully implemented to bring Scandinavian package tourists to the Eastern Cape.



*Green heat workers filling environmental-friendly veg*



*Installation of a cooling crystalliser on SA bioproduct*

Two of the implemented projects, AECI Bioproducts and Biological Control Products, fall in the biotechnology sector. These projects have enhanced South Africa's ability to deliver high-tech products ahead of international competition. Two of the implemented projects, Aspen Pharmacare and Hivex are in the health-care sector and three projects, namely Carbon, Greenheat and Global Forest Products, transform South Africa's agricultural resources into value-added products for the local and export markets.

# SELECTED ELECTRIC PROJECTS

## 3.5 SELECTED GENERAL ELECTRIC PROJECTS

GE was the first multinational to sign a pro-active and co-operation agreement with the DTI. GE's projects range from transportation, electrical, power, chemical to metals sectors. GE have indirect obligations on the defence and aerospace purchases.

### 3.5.1 Scaw Metals

This is a sourcing project by GE Transportation Systems (GETS) in the USA whereby Scaw Metals is supplying over half of the locomotive truck frame requirements of the GE company. The facility is currently producing two truck frames per day resulting in export revenues of approximately US\$5 million p.a. The production of truck frames is a highly complex engineering process and has resulted in a high level of capabilities being developed in the local plant.



*Truck Frame made by Scaw Metals in South Africa for export sales*

Scaw Metals have provided specifications by GETS USA to ensure they work to GE standards. Numerous visits have been made by GETS technical specialists to assist with the programme.

### 3.5.2 Reid & Mitchell Service Centre

GE Transportation Systems USA (GETS) appointed Reid & Mitchell (R&M) as an authorised service centre for GE electrical locomotive components. GETS actively seek refurbishing contracts / locomotive service contracts around the world. Rather than carry out all this work at GETS' US facilities, the refurbishing work required in these contracts is often subcontracted to a GE authorised service centre. An initial contract for repair work for Kenya railways was carried out. Other potential opportunities are being sought in Africa.

Reid & Mitchell has a licence agreement with GETS. In terms of this Licence agreement R&M are required to perform work to GE specification. R&M have been provided training by GETS USA to ensure they work to GE specifications

### 3.5.3 Federal Mogul

Sourcing of bearings from Federal Mogul for GE.



*Bearing made by Federal Mogul in SA for the export to the USA's*

# SIEMENS PROJECTS

## 3.5.4 Baygen

GE Investments invested US\$11 million into Baygen (now known as Freeplay) to launch the manufacturing of the wind-up radio and other wind-up electrical products. Since GE's investment in Baygen, the company has been able to increase its manufacturing sales and marketing of this product. From 1997 to 2000 a large number of products were manufactured in the Cape Town facility. Unfortunately the manufacturing costs were not competitive for the export market and after numerous efforts to reduce these, the manufacturing was transferred to suppliers in China. Freeplay has moved away from being a manufacturer and distributor, and now operates with other branded distributors globally. The research and development facility is still based in Cape Town and employs 25 people.

## 3.6 SELECTED SIEMENS LIMITED PROJECTS

Siemens Telecommunications, a subsidiary of Siemens Limited is one of the first few companies to be involved in the National Industrial Participation Programme, having signed the Strategic Partnership Agreement with **the dti** as early as 1998. The company has two projects running and is in the process of implementing a further two projects in the current year.

### 3.6.1 Software Development

This project entails the development and upgrade of software programmes used in Siemens' digital switching exchanges in a number of international markets. The development is for both mobile and fixed networks. This project is located in Pretoria and has involved a skills and technology transfer from Siemens AG and has created 72 direct jobs and an estimated 9 indirect jobs.

### 3.6.2 MDF Connector Strips

This project involves the local manufacture of main distribution frame (MDF) connector strips for local and international telecommunications markets.



MDF connector strip facility

It has so far generated in excess of US\$12million export credits created 11 direct jobs and an estimated 16 indirect jobs through subcontracting to small and medium size enterprises.

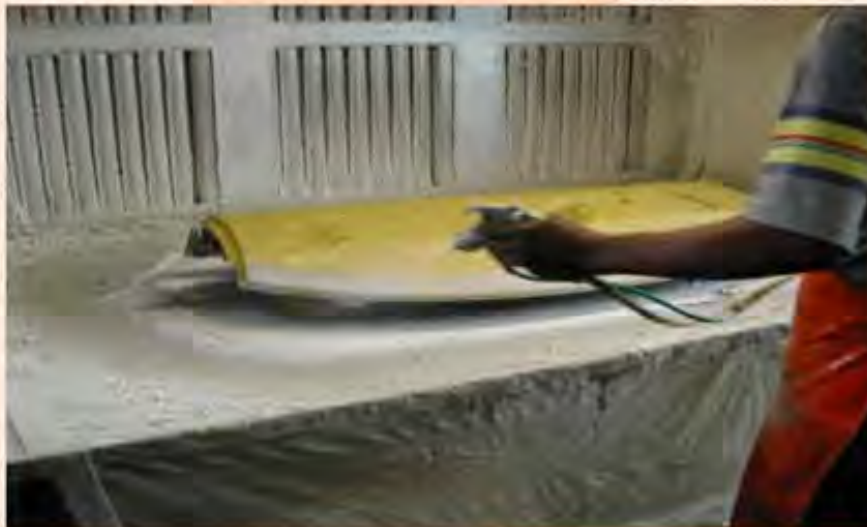
# DAIMLER CHRYSLER PROJECTS

## 3.7 SELECTED DAIMLER CHRYSLER PROJECTS

Daimler Chrysler is one of the first companies to enter into a strategic partnership agreement with **the dti** when the national industrial participation programme came into operation. It has participated in a number of projects of which credits are used to support its subsidiaries or affiliates. The following are some of the projects which the company is involved in.

### 3.7.1 Natural Fibre - Sisal re-enforced vehicle components

For the manufacturing of the rear parcel tray for the Mercedes Benz C class vehicles, sisal fibre is used. The natural sisal is produced farms in the Northern Province (Berlyn and Bendstore). Brits Textiles is involved in the supply chain. The overseas technology partner is Borgers (Germany).



*Local manufacture of Sisal re-inforced rear parcel tray*

Direct jobs numbering 150 have been created or sustained at the farms and at the production facility. The local content is approximately 70%. NIPP credits earned for this project have been used to discharge the obligation arising from the purchase of helicopters by the SAPS.

### 3.7.2 Atlantis Foundry

DaimlerChrysler purchased the foundry division from Atlantic Diesel Engines in 1999, thereby preventing the loss of 712 jobs in Atlantis in the Western Cape. The foundry now manufactures vehicle cylinder blocks for various overseas customers, such as Ssang Yong, Perkins, Eatons, MAN, Detroit Diesel and Cummings. A new line for the machining of crankshafts for DaimlerChrysler has also been set up. The local content of the finished products is 93.8%. New jobs created by the end of 2003 would amount to 500. NIPP credits accumulated under this project would be utilised to fulfil part of the Airbus obligation resulting from the commercial aircraft purchase by SAA.



# BOEING PROJECTS

## 3.7.3 MTU Workshop

MTU South Africa and its shareholder DaimlerChrysler decided to open a new sales and service centre facility in Johannesburg, which would include remanufacturing of on/off road diesel engines to satisfy the special future needs of the commercial diesel market in South Africa and sub-Saharan Africa. The foreign technology partner is MTU Germany. This project has created 22 jobs so far. The local content is estimated at 90%. Credits earned for this project would accumulate towards the indirect obligation of MTU resulting from the acquisition of patrol vessels by DEAT.

## 3.8 SELECTED BOEING PROJECTS

In 2001, South African Airways awarded a contract to the Boeing Company for purchase and lease of 21 Boeing 737-800 aircraft. As a result of this purchase, Boeing incurred an industrial participation obligation. The purchase by Armscor of the Boeing Business Jet in 2001 increased this obligation to US\$299 million. In 2002, South African Airways decided to purchase the Airbus range of aircraft and phase out, over time, all Boeing aircraft. As a result of this decision, SAA negotiated with Safair to take over the lease of five Boeing 737-800 aircraft which have not yet been delivered, thus reducing the total obligation.

### 3.8.1 Aerosud Work Package

Boeing transferred equipment, machinery and tooling from its facilities in the USA



to enable Aerosud to manufacture interior components for Boeing aircraft. The facility is located next to Waterkloof Air Force base and has created more than 100 jobs. Boeing has provided ongoing high-level, in-country support during all phases of commissioning of the plant with a full-time Boeing team for the programme enabling Aerosud personnel to have direct access to training at all levels. This training included general production methodology, lean production methods, quality management etc.

*Manufacturing facility for interior component for Boeing Aircraft*

## **3.8.2 Denel Work Package**

A facility for manufacturing aircraft components is located in Kempton Park. Boeing also transferred high-tech equipment from its facility in the USA. This facility has recently been established and will be officially opened in June with first exports expected in November 2003.

## **3.8.3 Maintenance and Modification work**

This project involves allocating work to SAA Technical to carry out maintenance and modification work on Boeing aircraft. Very little has been achieved so far due to price disagreements between Boeing and SAA Technical. The IPS has had a number of meetings with both Boeing and SAA Technical in order to move this project forward.

## **3.9 UPDATE ON AIRBUS OBLIGATION**

Airbus incurred an Industrial Participation obligation as a result of the purchase by SAA in 2002 of a fleet of Airbus aircraft. A number of projects have been identified and will be implemented during the course of this year. These projects are mainly in the aerospace industry but also include projects in the pharmaceutical and automotive sectors.

Aerosud has recently signed an agreement with Labinol, a French-based Airbus sub-assembly company, for the manufacture of electrical racks for the A320 family of aircraft. Airbus is also involved in a process of qualifying Aerosud for design and manufacture of the galley. This process should be completed in the last quarter of 2003.

The agreement signed between Airbus and **the dti** through the Industrial Participation Programme has enabled South Africa to be identified by Airbus as one of the top five countries in the world in which Airbus will be actively involved to identify business opportunities.