

'Black Egret' exceeds expectations

The bunker vessel 'Black Egret' has exceeded all functional and aesthetic expectations since its launch in September.

The vessel was on budget after the first month and she is set fair for a long life of service delivering bunker oil to ships calling at Durban harbour.

The innovative construction of the vessel from sections bought from a failed river barge project in the Congo, was described in the previous issue of FFS News. The barge was built to the highest operational standards, which, amongst other things, allows for faster turnaround of ships calling at Durban for bunkers only, says Captain Phil Harris, general manager of FFS Bunkers. "It would be gross flattery to compare her to a cruise liner, but a well-engineered vessel has an aesthetic beauty of its own," he says.

The bunker barge, decked with flags and escorted by tugs, sails across Durban harbour to the official launch ceremony.



Hats off to the 'Black Egret', the fifth vessel in the FFS Bunkers fleet. From left are Phillip Vermaak, FFS workshop manager, Mike Irwin, Peter Froude and Phil Harris all of FFS Bunkers, and Trevor Forbes, project manager.

The 'Black Egret' can transport 1100 tons of marine fuel oil and 350 tons of distillates (gas oil and diesel). She is double-hulled on the sides to prevent the penetration of the oil tanks in the event of an accident. The barge is 58 metres long, 10 metres wide and 3,9 metres deep and - with three engines - is highly manoeuvrable.

Tony Hurter, founder of FFS, said at the launch function that the barge epitomises the spirit in the group. "We could not afford to go the conventional route for a new build so we set about designing a barge specifically suited to our needs, but using components and skills available to us locally."

In addition to her conventional bunkering abilities, the 'Black Egret' will bring a new dimension to Durban's bunkering facilities by offering a quality guarantee in the form of a full laboratory analysis of the fuel delivered. The receiving vessel will obtain two Certificates of Analysis reflecting the oil quality supplied and delivered. Since implementing this system several years ago, in its other marine operations, FFS has managed to eradicate quality disputes completely. This quality service is undertaken by an ISO 9002 company specialising in marine oil analysis.

One of the Best

It's official. FFS Bunkers is one of the best bunker suppliers in the world. FFS was voted by Bunkerworld.com readers as runner-up in the Best Bunker Company of 2001 poll because of "sharp service, and innovative and variety of products for supply and trading".



Proud FFS founders Diane and Tony Hurter at the launch.

Moving barge sections from a Richards Bay yard (left) marked the start of a major exercise to build the 'Black Egret' (right) seen here being admired by visitors at the launch in Durban.

what's inside



Eva Martin, branch administrator for FFS Bunkers at Richards Bay, has a new tank farm to look after.

Waste management award

New tank farm

Cape expands transport

New effluent plant

Expo spreads its wings



Phil Harris, FFS Bunkers, Don Hunter, FFS Refiners, Jenny Finnigan, Shepstone and Wylie, and Rajen Reddy, KZN Oils, at the launch.

Construction of yet another bunker barge, which will be almost identical to the 'Black Egret', is scheduled to start soon at the FFS workshops in Umhlatuzana. The company's fleet now numbers five vessels and is operational in the three major ports of South Africa.

Key postings at FFS

FFS has recently made two key appointments:



Pierre Rossouw

Pierre Rossouw has been taken on as FFS group procurement manager and will be responsible for sourcing fuel stocks. He has 25 years of refinery experience and brings a wealth of knowledge to the company. Pierre will also be involved in marketing and quality management.

Alison Haycock is the new group environmental officer, a position made vacant when Craig Stephenson returned to New Zealand. Alison has a master's degree in geographical and environmental sciences.

Her experience includes environmental impact assessment, environmental management plans, vegetation surveys, development applications, and project management, to a recent interest in ISO 14001 and environmental auditing.



Alison Haycock

FFS wins waste management award

FFS Refiners won the 2002 silver award (second place) from the Institute for Waste Management of South Africa at a gala ceremony attended by the provincial environmental minister, Mr. Narend Singh.

The panel of judges, including representation from the Department of Environment and Tourism, makes these annual awards to industrial companies who show exceptional levels of expertise and commitment to environmental management and waste minimisation. This is the second accolade for FFS which also received a merit award in 1996.

Congratulations go to branch manager, Mark de Souza, and his Durban team for this prestigious achievement.



Minister Narend Singh presents the award to branch manager Mark de Souza.

Government gets tough on pollution

FFS Refiners has a vital role to play in reducing pollution by designing and supplying equipment that will allow factories to comply with new legislation.

The National Air Quality Management Bill is expected to be ready for public comment in September 2003, and enacted in 2004. FFS will also continue to promote the use of its low sulphur fuels that can be cost effective and are more environmentally friendly than most other fuels.

Alison Haycock, FFS group environmental officer, says the government is starting to wield a big stick to bring down pollution levels. The new legislation will replace the 1965 Atmospheric Pollution Prevention Act that took a softer line with voluntary guidelines on pollution levels. The Department of Environmental Affairs and Tourism revised these guidelines in December 2001 and recommended that the annual average maximum allowable ambient sulphur dioxide be reduced by nearly 40% from 0,03ppm to 0,019ppm.

The emphasis of the new Act will be on the reduction or elimination of priority pollutants such as sulphur dioxide, and new air quality standards set for different areas will be legally binding.

Durban South has been identified as a "hot spot" and targeted as a pilot project for testing and developing strategies for dealing with air pollution "hot spots". Regionally based laws applicable to other "hot spot" areas such as Secunda and Sasolburg will also be developed. The overall government focus is on the phasing out of dirty fuels within four years.

The newly formed South Durban Waste Minimisation Club aims to help industries reduce atmospheric emissions and increase energy efficiency.

Alison says many industries are better suited to emission gas scrubbers, filters and precipitators, than fuel substitution. "The focus should be on the amount of pollution generated rather than the substitution of fuel. Lime kilns are a case in point. They absorb sulphur and should not be prevented from using low-cost, high sulphur fuels where applicable. A far better solution is to limit sulphur emission by allowing the market to determine the most cost effective and efficient way of meeting target levels. Thus, innovation and technological advances are not stifled."



Peter Froude and Phil Harris of FFS Bunkers at the new tank farm in Richards Bay.

Richards Bay tank farm upgraded

FFS has recently designed and built a 1680 m³ capacity storage and transfer tank farm at Richards Bay costing R1,7 million.

This facility is an upgrading of the existing infrastructure to enable larger parcels of oil to be bulked up for sale or received in bulk by sea. The facility was designed in-house including the tanks, pumping and piping for loading by road, rail or sea, fire systems, civil work, electrification and instrumentation design. The project was fast tracked to meet an eight-week deadline to receive a shipment.

The tank fabrication, consisting of 12 x 140 m³ horizontal steel tanks weighing 6500 kg each, was sub-let to Koch's Cut & Supply and STM Engineering who took just 20 days to make the tanks. Koch's and STM worked 24-hour shifts to meet the time constraint and deliver these abnormal loads from their Durban workshops to Richards Bay on the due dates. Wades Civils constructed the bund, separator and concrete bases and Lenoba Construction laid drains and sealed the bund floor with asphalt paving. The designs were done to meet comprehensively SABS 089 for bulk installations of petroleum.

The more expensive small tank option was necessary due to the tenuous lease currently held by FFS in the port, so that the tanks could be easily relocated. Senior design engineer Nicholas Matter ran this extremely fast project and ably brought it to completion.

Currently the facility receives heavy fuel oil by rail, which is stored and blended for transfer to the MT 'Livingstone' for bunker service. Whilst under construction, FFS Refiners was sandblasting and painting barge sections on site for storage adjacent to the tank farm, for a future FFS Bunkers barge.

Cape Town drivers are among the best

Cape Town's heavy duty truck drivers are showing that it is difficult but not impossible to achieve 100% consistently on the Data Fos tachograph analysis system. Mike Heffernan, FFS Cape Town's transport manager, explains how this system works:

"Each of our trucks is fitted with a recording device similar in principle to the black box flight recorder used on aircraft.



Full marks: Drivers Ruben Toms and Stanley Ohlsen with their special merit certificates.

From vehicle activity records, it is possible to analyse a driver's style accurately and rate the driver against set standards.

Control Instruments, a national supplier of these recording tachographs, runs a specialised analysis system and every driver receives a monthly report-back and rating on tachograph charts selected at random from daily recordings."

The results of the system in Cape Town have been outstanding, with the team of drivers now producing a monthly average rating of 99,8%. To top that, two drivers - Ruben Toms and Stanley Ohlsen - have been awarded special merit certificates by Control Instruments for achieving an exceptional six maximum 100% scores.

These results prompted the Control Instruments analysis bureau to advise FFS that Cape Town drivers were among the highest-scoring in the country, in its category of business. "It is very gratifying to have our team singled out as top drivers nationally," he says.

Cape branch expands in-house transport

The Cape Town FFS operation continues to expand its in-house transport operation with the delivery of two 'pumping' semi trailer rigs from the company's Durban-based construction facility.

Dave Sands, the Cape regional manager, says the trend away from the



A new FFS-built rig operating in Cape Town.

previously wholly contracted-out operation has very definite strategic and economic advantages. "While our transport contractors play an important part in the Cape operation we will continue to work towards greater control through the operation of our own vehicles." In a business that runs seven days a week 24 hours day, the Cape branch now moves more than 23 000 tons per month of feedstock and finished product in and out of the Vissershok factory.

The Cape fleet has grown from three units to 10 over the past two years under the watchful eye of transport manager Mike Heffernan.

Flexibility and fast reaction in the transport scheduling department have become the hallmark of the Cape Town operation, particularly in the marine waste oil market.

The Cape Town transport operation has recently been successfully integrated into the ISO 14001 Environmental Management System accreditation held by FFS Cape Town, a move that further enhances a safe and environmentally responsible approach to the transportation of FFS products.

With further expansion of the fleet planned to optimise the use of own equipment, Cape Town's transport department will continue to facilitate the growth of the Cape branch.

New plant boosts effluent water treatment capacity

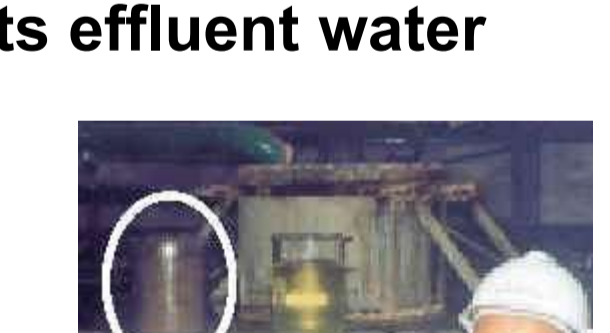
A new FFS effluent water treatment plant is playing a vital role in efforts to prevent bilge pumping at sea.

FFS Refiners senior project manager Gregg Hunter says that under the Marpol Agreement the port authorities are required to police the safe disposal from Durban harbour of all effluents including ship slops and oily effluent water. This measure to stop bilge pumping from ships at sea, has increased demand for the treatment of effluent water.

He says demand has also risen because of the reluctance of Durban's hazardous landfill site to accept solid material with too much liquid.

The new FFS plant at Jacobsin Durban is now required to process up to 3000 tons of effluent a month.

In the past about 1000 tons a month of effluent water were received in the old FFS plant with the used oils and marine slops that were collected and brought in for processing.



Teakwood Road refinery factory manager Stephen Julius at the new effluent treatment plant. The jar on the left contains feed material and the clear jar on the right shows the big improvement in water quality.

The old plant had a process rate of only about four tons an hour and could not meet increased demand for treatment. It was also unable to meet the quality specifications required by Durban Metro. Due to space constraints, the clarification step was done with dissolved air flotation and there was a problem with the stability of the floc blanket so that it could only reduce oil content to 200 ppm. There was no space for a suitably-sized static separator and this function was carried out in the storage facility. "There was a lot of fiddling in the one tank, and it didn't work very well."

"Used oil is potentially hazardous and is difficult to treat in conventional sewage works. Thousands of litres of oil become unfit for its intended purpose every day and most of it is discarded if not recycled. Oil can cause severe damage to ecological purification works which in turn cause extensive sewage degradation and poses a serious risk to human health. Without recycling the risk of illegal dumping of used oil into sewers, drains, the environment, or even worse, the water sources, could increase dramatically.

FFS recently acquired an adjacent property in Jacobsin, and now had the space to build a clarifier to settle the lime floc. The dissolved air flotation was retained for the removal of oil before the flocculation step and a plate and frame filter press was added to de-water the lime floc and reduce the solid waste generated to meet ISO 14001 EMS objectives.

The new plant has seen a great improvement in water quality with municipal constraints of less than 50 ppm of oil content being met. The plant design criteria were a 15 tons an hour process rate with a 25-35 ppm oil content. The plant had to be robust, easy to operate and cost efficient. "I found after exhaustive laboratory test work with many proprietary flocculents that the traditional lime treatment system was still the most efficient and cost effective," says Gregg.

DWAF on oil recyclers

The following extract from a letter to Dave Sands, FFS Cape branch manager, from the deputy director: waste management of the Department of Water Affairs and Forestry, once again emphasises the vital environmental role of oil recyclers:

"Used oil is potentially hazardous and is difficult to treat in conventional sewage works. Thousands of litres of oil become unfit for its intended purpose every day and most of it is discarded if not recycled. Oil can cause severe damage to ecological purification works which in turn cause extensive sewage degradation and poses a serious risk to human health. Without recycling the risk of illegal dumping of used oil into sewers, drains, the environment, or even worse, the water sources, could increase dramatically.

"Regulation of illegal dumping is difficult to enforce by local authorities, who would in such cases have to undergo costly clean-ups. In the bestcase scenario apart from recycling, the oil would have to be disposed of in a hazardous disposal site that brings about nuisance conditions and space problems. Indirectly it is the local authority's responsibility to ensure that used oil in its area is properly managed. Because recycling and re-use rank higher on the waste management hierarchy than disposal, local authorities should promote used oil-recycling facilities."

Expo spreads its wings

New developments are set to lift the Expo for Young Scientists movement to a new plateau.

FFS has agreed to sponsor Expo in 2003 in the Western Cape for the next five years, in addition to its sponsorship in KwaZulu-Natal since 1990. Don Cochran, financial general manager of FFS Refiners, says there is also a move to ensure that a number of development projects are taken to the national Expo each year. Another project in the offing is the extension of Expo to new regions in KwaZulu-Natal, such as Zululand

"Expo is all about providing the opportunity for young people to apply scientific process, and encourage them to study further. The promotion of science and the application of scientific thought and principle, as embodied by Expo, is absolutely vital for the future growth and prosperity of our country," he says.

Expo has opened doors for many budding scientists.

This year's Crawford College Grade 10 pupils, Benjamin van Heerden (15) and Carike Marais (16), took part in the International Hong Kong Joint Schools Science Expo. The talented twosome were gold medal winners at the Expo For Young Scientists last year and then represented KwaZulu-Natal later at the National Expo For Young Scientists in Pretoria where they were selected to go to Hong Kong.

Their Sun 2 Skin project drew attention to the dangers of basking in the sun without suitable protection.

Laura-Jane Airey, a gold medalist in 2001 and the best "up and coming scientist", successfully entered her poster project titled Industries' Waste - A Soil Substitute in the International WasteCon 2002 conference in Durban.



Don Hunter (right), chief executive of FFS Refiners, presents Isak du Preez (left) with a gold award for his project Robosoccer, and the award for the best project for seniors at this year's FFS Expo for Young Scientists in Durban. Isak, of the Domino Servite school in Zululand, has previously twice won the best award for juniors at the annual Expo for KZN students.

In a letter to FFS she said: "It was a wonderful experience and I would like to thank you for giving me the opportunity to dream bigger and do more through Science Expo."

This year's Expo in Durban attracted 550 entries from 60 KZN schools including 19 from a disadvantaged background. Entries are set to increase next year when Expo exhibits will be included for matriculation assessment marks for grades 11 and 12, says Expo chairman Graham Rudolph.