

STRONG TRADE FIGURES

Cargo handling figures for the first six months of 2014-15 financial year to December 31 show that the Port of Esperance is on track for another bumper, if not record, year.

Nearly 7.450 million tonnes of cargo has been either discharged or loaded at the Port during this time, slightly up on the 7.300 million tonnes recorded for the corresponding period last year, a year that resulted in a record 14.938 million tonnes being handled by the Port.

Exports totalled more than 7.084 million tonnes and imports 435,939 tonnes.

Iron ore continued to dominate the trade numbers with over 5.990 million tonnes or about 80 percent of the total, an increase of nearly half a million tonnes over the previous year's half yearly result.

912,257 tonnes of grain were exported in the first six months, down from 989,514 tonnes in 2013-14, a year that resulted in an unprecedented 2.6 million tonnes of wheat, barley, canola and lupins being exported from Esperance.

The Esperance agricultural zone experienced another good year and, despite early estimates of an average year of about 1.6 million tonnes of exports, a strong finish to the harvest should see the total pass two million tonnes by June 2015, only the second time this has occurred.

Nickel exports for the first six months increased, with a significant rise in the exports of nickel hydroxide. To December 31, 89,544 tonnes of the product had been shipped in containers, an increase over the previous half yearly figure, and if the current rate of export continues the total should pass last year's 152,602 tonnes.

Nickel concentrate figures also rose in the first six months of the new financial year, increasing to 59,295 tonnes compared to



Sulphur imports rose significantly in the first six months of the 2014-15 financial year.

the previous year's total of 92,653 tonnes.

The increase in nickel exports contributed to an overall increase in the total number of containers handled in the first six months of the year, up from 15,380 transfers (8464 in, 8368 out) in the first six months of 2013-14 to 16,832 this year.

To December 31, 279,704 tonnes of sulphur had been discharged and stored at the Port before being road transported to the Ravensthorpe nickel mine, a significant increase on the previous year's total of about 160,000 tonnes.

Fertilizer and fuel imports were slightly lower than the previous year's figures.

Ninety-seven trading vessels berthed at the Port during the first half of the year, up from 92 the previous year. Of the total, 37 loaded iron ore, 26 grain, 13 rotated containers and seven discharged sulphur.

The Port of Esperance is looking forward to an equally productive second half of 2014-15

Teamwork Builds Safety Culture



Port Employees of the Year (from left) Brian Gallop, Marama Stevens, Tom Smitheringale and Tom Miller made safety the top priority for employees during 2014. (NB: Tom Smitheringale left the Port late last year.)

The Port of Esperance has long been aware of the benefits of teamwork. Closer working relationships between our various Departments have seen significant productivity improvements across all of our business activities.

Teamwork has had, however, a more important outcome for Port personnel over the past 12 months or so: it has made the workplace a safer and healthily place to work as our people go about their daily activities.

And this has been extremely important as our workforce continues to grow in size to meet customer requirements.

Our Department of Occupational Health and Safety (OHS) has introduced a raft of processes to foster the growth in our safety culture.

They relate to our hazard and risk management systems, incident reporting and investigations, continuous auditing of all our activities to identify potential risks and training, training and more training.

These processes are seen as lifesaving, and all Port personnel are involved in these activities in one way or another, no exceptions.

And our Emergency Response Team has been brought up to full strength and each team member has undergone accredited training and continuous refresher training.

The efforts of our OHS personnel in putting this safety program together earned them the title of Employees of the Year for 2014.

LONGEST BELT CHANGEOVER

In the harsh, corrosive environment in which the Port of Esperance operates, maintenance is a daily, ongoing prerequisite to meet the requirements of our Operations Department and, importantly, our customers.

One vital piece of infrastructure that enabled the Port to handle more than 11 million tonnes of iron ore last financial year was its conveyor circuit.

Forty-six separate conveyors load and discharge bulk products at the Port, 27 of which make up the iron ore circuit. The overall length of circuit is more than eight kilometres.

Rollers need constant maintenance, and conveyor belts need replacing, some more than others.

Conveyor 10 (CV10) belt, for example, the shortest of all the conveyor belts being only 28 metres long, needs replacing every five to six months, while CV36, the berth three shiploader belt, is changed out about every 18 months.

In early November last year, during a lull in iron ore handling operations, a little piece of Port history was made when the CV32 belt was replaced for the first time since it was commissioned in 2002, a life of 12 years during which time about 100



Maintenance Leading Hand Eddie Wierobiej oversees the new CV32 belt installation

million tonnes of iron ore were exported.

At 1153 metres, it is the longest in the Port's network and required a team of maintenance personnel and contractors four days to remove the old belt, run out and install two rolls of new belt, each one weighing over 14 tonnes, and splice the two together.

A powerful 250kW electrical motor drives this belt at a constant 3.5 metres a second - or about 12 km an hour - to

maintain ship loading rates of between 4150 and 4300 tonnes and hour, and for about 14.5 hours a day, seven days a week to meet shipping requirements.

Other vital preventative maintenance was carried out during the changeover.

At the current rate of iron ore exports going through the Port of Esperance, the new CV32 belt is expected to last at least another 10 years and maybe more.

Productivity Milestones

Over the past 18 months, the Port of Esperance made impressive productivity improvements in its sulphur handling and container exchange operations.

Both functions have improved by almost 70 percent in this time, which has been achieved through better planning and training, investment in plant and equipment and closer cooperation with our clients.

Since July 2013, about 600,000 tonnes of bulk sulphur has been discharged at the Port and about 40,000 containers exchanged. The sheer volume of this work has provided the gantry crane operators with the experience required to improve the handling rates.

Another factor has been the training program introduced to increase the number of crane operators as production rates were hard to maintain let alone improve in earlier times because of a lack of qualified personnel.

Eight more qualified operators brought the total to 19 now employed by the Port, which now ensures no downtime because of fatigue or the lack of qualified personnel on site at any one time.

Also, dedicated maintenance personnel were deployed to mainly work on the gantry crane; a six weekly maintenance cycle was introduced; and more than \$1 million worth of critical spares, including a second grab, were bought which are stored on site and available 24/7; all of which have contributed to improved crane reliability and availability.

Planning has also helped. The experience gained by the crane operators enables them to predict accurately the life of

Container handling figures improved significantly



the sulphur grab wires, and the availability of the second grab enables them to be changed over between ships, thus avoiding breakages and lengthy delays to operations.

The close working relationship between the Port and its clients has led to big improvements in the quality of sulphur coming into Esperance, and the chartering of a dedicated container vessel that is more conducive to the safe and efficient exchange of containers has helped reduce ship turnaround times.

A dedicated container storage area developed on the old Black Swan shed pad, which is located adjacent to berth two, has also significantly improved exchange regimes and reduced transport costs during container exchange operations.

The installation of the hydraulic shore-based mooring system has improved vessel stability alongside the berth, assists with achieving higher productivity as well as a safer working environment for Port personnel.

Since being installed on berths one and two, no mooring line breaks have occurred.

Simulator Tests Port Pilots

Imagine trying to park a Mack road train in a confined space, parallel to a footpath, with the rig powered only by two hand pushed lawn mowers. Doesn't sound too easy, does it.

Port of Esperance Marine Pilots deal with among the largest moveable man-made object on earth - cape size bulk carriers - as well as Panamax size vessels, passenger ships and container vessels.

They manoeuvre them down relatively narrower channels than the driver of a road transport train is required to do and, furthermore, the 300 metre plus long vessels that weight more than 90,000 gross tonnes are powered by about 8000 horse power motors.

That's about one horsepower for every 10,000 kilograms of ship; hence the Mack truck-lawn mower analogy.

More interestingly for Pilots is that they have to contend with wind and tide and, of course, ships don't have brakes.

Every two years the Port of Esperance Pilots head to Fremantle to train in a simulator, a computer based set-up that resembles not only the bridge of the ships they handle but also Esperance Port, its channel, berths and navigation aids are all included.

It is part of their CPD (Continual Professional Development) Program.

The simulator presents them with different scenarios to test their knowledge, their skills and their reaction time under stress. Different scenarios deal with things like ship engine failure, rudder or steering failure, winds, fog or rain, or a tug engine failure.

All of the different scenarios present increasing levels of complexity with the primary purpose of developing and honing pilots' skills in dealing with any emergencies that may arise.

A local tug master accompanies the Esperance Pilots and takes part in the real-life exercises, sits in a full bridge tug simulator with identical controls and capabilities to the tugs currently operated locally, and maintains normal communications with the pilot.

Their response time is in real time, and the exercises resemble as closely as possible an actual ship manoeuvre.

These exercises can't be practised on real ships, in real situations because of the risk of damage to the vessel or Port infrastructure or tugs. After all, the cost of one of these ships is in the vicinity of \$60 million.

In the simulator the only thing that can be damaged is a Pilot's ego.

Port pilots manoeuvre large vessels in tight, confined spaces



BERTH STRENGTHENING REVIEW

Consultant engineers have prepared two detailed design options and documentation for a scope of works to strengthen the berth three wharf* to accommodate current and other potential iron ore exports.

Extensive computer modelling of the wharf under various operating scenarios was undertaken and provided the engineers with the detailed information needed to develop the wharf strengthening designs.

Berth three was constructed and commissioned in 2002 to handle about five million tonnes of iron ore a year over an anticipated short mine life.

Larger volumes of ore are currently being exported, more and larger vessels use the berth, and a longer than expected use of the facility is causing concerns about the fatigue strength of the structure which relates to the number of loading cycles the shiploader undertakes along the wharf.

Last financial year the Port exported more than 11.288 million tonnes of iron ore from the berth, and since 2002 about 100 million tonnes has flowed across the iron ore circuit belts and ship loader.

Last year 69 cape size ships tied up alongside the berth, and the gross tonnage of these vessels was more than

9.835 million tonnes, the highest recorded use of the berth.

Esperance Port started exporting iron ore from Portman Limited's Koolyanobbing operations from berth two in 1994. Between that year and 2002, about 10 million tonnes of iron ore was shipped out of Esperance for Chinese and Japanese customers.

**Did You Know that the word wharf is an acronym for Ware House At River Front, coined when sailing ships tied up alongside the large warehouses on the Thames River in London to load or discharge their cargo.*

Port Personality

Caroline Aylott

A snapshot of where Caroline Aylott has been and what she has done indicates a love of travel and a desire for knowledge.

She was born in Sydney, undertook primary and secondary schooling in Sydney, spent a gap year in the United Kingdom, completed her tertiary education at the Sydney University, spent six months sailing and diving off the south-east coast of Queensland, spent a year working for an environmental consultancy in Sydney, and then a year travelling around Australia living out of a tent and a sedan.

Travelling convinced her that city life was not all it's made out to be, and she applied for an Environmental Technical position with the Port of Esperance, her Science Degree with a major in environmental studies making her highly desirable for the position and she has fitted in extremely well with the team here.

Not content to rest on her academic laurels, she has since started post graduate studies in climate change at the University of Adelaide.

Caroline's job involves a wide range of monitoring activities - dust and water- as well as compliance issues, managing scheme rainwater and treated water use, and overseeing the marine



pest monitoring program introduced by the Fisheries Department among other things.

Now the travel bug has bitten again, but this time she's off to Turkey on a sponsored six-week vocational study program courtesy of the Esperance Bay Rotary Club.

Flying with four other young professional women from the south-west of WA, the party's first destination next month is the country's capital, Istanbul.

After that and for the next six weeks, Caroline and the others will be hosted by local Rotarian families at six different locations in the European part of the country to the west of the capital.

She's prepared a biography for her hosts and a wish list of things she wants to do, which includes looking at how Turkish ports manage their environmental issues, exchanging and sharing knowledge of her interests in the environment, natural resource

management and climate change with environmental colleagues and fostering long-term professional relationships and friendships.

But it's not all work. Staying with local families and participating in family activities, provides many other opportunities such learning about Turkish food and music, dancing, architecture and their history. It will enable Caroline to embrace the country's culture.

She also has to act as an ambassador for Australia, WA's south-west and Esperance, her adopted home town, by making a presentation to each of the local Rotarian clubs that are hosting the visit. She has to tell them about where she is from, who we are, and what we do here.

Over the past six months or so she has spent more time preparing for this part of her excursion than anything else because it has to be delivered in the local language - Turkish.

2014 Training Hours

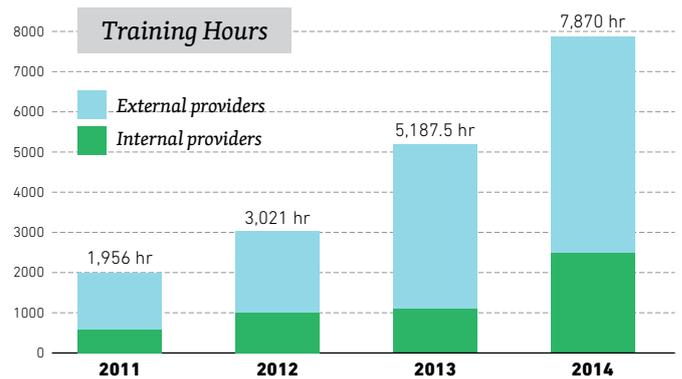
The number of hours the Port of Esperance dedicated to training increased by 51 percent during 2014, up from 5187 hours in 2013 to 7870 hours last year. Most of the training relates to improving the awareness and safety of our personnel.

Since 2011, when the total number of training hours was less than 2000, there has been a four fold increase.

It included training relating to the safe use of the hydraulic shore tension system, handling forklifts, qualifying our personnel who work in or over water in the Elements of Shipboard Safety, working in confined spaces, ensuring our people have current senior first aid certificates, verifying competency for handling plant and machinery, and emergency response training.

Some training is mandatory, like inductions for new employees which is ongoing throughout the year and introduces the Port's rules, regulations and culture.

Other training, such as a manual handling courses teach



our personnel how to lift and hold equipment safely, fatigue management courses that enable employees to determine when they are fit to work or it is time to go home, and courses to identify and use the correct personnel protective equipment for whatever work they may be doing.

More than two thirds of the total hours were delivered by external training specialists and the rest by qualified Port personnel.

