

STATE OF THE MARKET REPORT FOR THE MINING, OIL AND GAS SECTOR

VERSION 2 - OCT 2016



Brought to you by:



Insights on businesses serving the Australian
Mining, Oil and Gas Sector

INTRODUCTION

With our **Steel Efficiency Review®** we work with our customers to develop real solutions. We look closely at your production and processing lines, identify cost and time savings and recommend incremental changes which can translate into business improvements.

THE STEEL EFFICIENCY REVIEW® PROVIDES KEY RECOMMENDATIONS BASED ON THOSE WELL-KNOWN 7 AREAS OF WASTE:

➤ **OVER PRODUCTION**

➤ **TIME IN WAITING**

➤ **TRANSPORTATION**

➤ **PROCESSING**

➤ **INVENTORY**

➤ **MOTION**

➤ **REWORK**

IT'S FREE, AND WE DELIVER OUR REPORT IN 2 WEEKS.

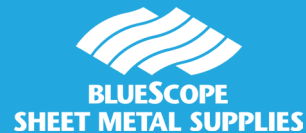
There is no cost and no risk in undertaking a **Steel Efficiency Review®**. Our SER® Consultants simply offer you recommendations on how to improve your operation's efficiency and productivity.

We come back to you within two weeks with a short report, detailing our findings, recommendations and cost-saving solutions

WHO ARE WE?

We're owned and supported by the manufacturing and processing arms of **BlueScope**. Our network comprising BlueScope Sheet Metal Supplies, BlueScope Plate Supplies and BlueScope Distribution provides a full range of material supply, logistics and management options to meet your individual needs.

We offer a comprehensive suite of steel and aluminium products and processing services, and our expertise covers every major industry sector: Building & Construction, Transport & Automotive, General Manufacturing, Mining, Oil & Gas.



STATE OF THE MARKET - MINING, OIL AND GAS SECTOR IN AUSTRALIA

Welcome to the Steel Efficiency Review® State of the Market report for businesses serving the Mining, Oil and Gas Sector in Australia. This report has been compiled from our unique and proprietary industry insight resource – The Steel Efficiency Review®.

1011 >>> REVIEWS



To date we've completed 1011 Steel Efficiency Review® visits nationally, with steel businesses both large and small. This has amounted to over 2526 hours developing real solutions to save them time, money and reduce risks.

From these SER® appointments we have isolated findings relevant to specific industry sectors and niche businesses within that sector to identify business improvement insights – those that can help you run your business more profitably.

We've also reviewed and summarised relevant industry research from IBISWorld Industry Reports to provide you with a more macro view on where the industry is heading and the Key Success Factors (KSFs) relevant to your business.

IN THIS STATE OF THE MARKET REPORT, WE FOCUS ON BUSINESSES SERVING THE MINING, OIL AND GAS SECTOR IN AUSTRALIA.

This report provides you with a summary of the common challenges faced by businesses serving the Mining, Oil and Gas Sector. We also offer solutions to help you to build a more efficient and profitable business.

We hope this State of the Market report provides an opportunity for you to look closer at your business and review your operation.

You're also welcome to participate in our complimentary Steel Efficiency Review® as a 'fresh set of eyes' helping you to identify ways to turn steel into gold. If you have just participated we look forward to working with you to uncover the 'gold' in your business.

Regards

Gerald Cornelius
National Manager
BlueScope Flat Steel Products Division

For more information, visit:
steefficiencyreview.com.au



KEY FINDINGS FROM CONDUCTING OUR STEEL EFFICIENCY REVIEW® ON 92 BUSINESSES SERVING THE MINING, OIL AND GAS SECTOR

Based on the results of 92 Steel Efficiency Review® visits completed on steel businesses serving the Mining, Oil and Gas Sector in Australia, we have identified areas for improvement and waste reduction.

OVER PRODUCTION



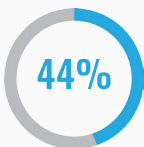
of clients have opportunities to make savings in waste.

TIME IN WAITING



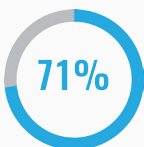
of clients have opportunities to reduce the time in waiting in their operations resulting in significant work in progress and time savings.

TRANSPORTATION



of clients have opportunities to improve productivity and reduce freight costs.

PROCESSING



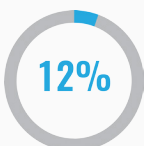
of clients have opportunities to reduce excess waste amounting to greater production runs and savings in material cost.

INVENTORY



of clients have opportunities to reduce delays and excess stock stored to remove the time wasted managing inventory.

MOTION



of clients have opportunities to reduce motion problems and safety risk.

REWORK



of clients have opportunities to reduce the amount of rework resulting in significant savings in material cost.

3 KEY SUCCESS FACTORS

The 3 key success factors for these 92 steel businesses operating in the Mining, Oil and Gas sector nationwide are:



STOCK OPTIMISATION TO IMPROVE PRODUCT DELIVERY SCHEDULES



QUALITY ASSURANCE AND CERTIFICATION TO ENSURE PRODUCT IS FIT FOR PURPOSE, REDUCING EXPOSURE AND RISK



LAYOUT AND FLOW IMPROVEMENTS TO ELIMINATE BOTTLENECKS AND MACHINE DOWNTIME

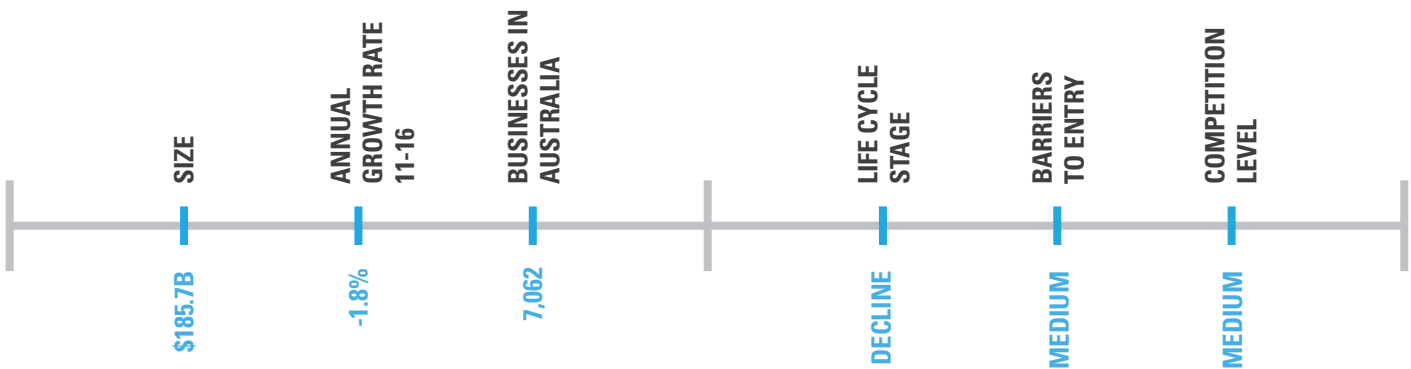


MINING, OIL AND GAS IN AUSTRALIA

IBISWORLD DEEP DIVE

All industry information provided in this State of the Market Report has been referenced from IBISWorld Industry Report - Mining in Australia - May 2016.

KEY STATISTICS & CHARACTERISTICS



INDUSTRY PERFORMANCE

The Mining, Oil and Gas industry's performance depends on pricing levels, the value of the Australian dollar, and global trends in supply and demand for commodities. As new supply takes years to develop, division operations are generally cyclical. Sudden shifts in demand drive high prices in the short term, increased investment in the medium term, and output growth and capacity rebalancing in the long term. Depending on the commodity group, this cycle can play out over more than a decade. Record investment early in the past five-year period prompted growth in division employment, as exploration and mining services, and related construction and support services industries expanded.

In this environment, expansion in production capacity for a range of mineral commodities will be the key factor in ongoing division growth. Growing output and continued export increases, particularly for iron ore and liquefied natural gas (LNG) are expected to support division growth over the next five years. Division revenue is forecast to grow at an annualised 5.5% over the five years through 2020-21, to reach \$243.2 billion. The industry is expected to benefit from major export growth in natural gas, coal and iron ore.



INDUSTRY PRIMARY ACTIVITIES

- » Coal mining
- » Oil and gas extraction and mining
- » Metal ore mining
- » Non-metallic mineral ore mining
- » Other mineral mining and quarrying
- » Services to mining
- » Mining exploration services
- » Contract and mining support services

SOME POSITIVE TRENDS

Over the past decade, developing countries such as China and India have industrialised rapidly, driving demand for natural resources and industrial commodities.

As global demand surged, many Australian mining companies committed to new projects, resulting in a swell of capital investment and mining volumes.

This flow of investment worked its way down the supply chain, through the exploration and mining services industries, and increased mining output.

IMPORTS LIKELY TO CONTINUE THEIR RISE

The industry has contended with strong and increasing import competition over the past five years.

Annual division revenue is highly volatile due to movements in production, world prices for major commodities, export demand, and exchange rates. Over the five years through 2015-16, industry revenue is expected to decrease at a compound annual rate of 1.8%.

INDUSTRY PRODUCTS & SERVICES

- » Coal mining
- » Exploration and other mining services
- » Iron ore mining
- » Non-metallic mineral mining and quarrying
- » Oil and gas extraction
- » Other metal ore mining

OVERALL RISK RATING

Overall risk rating in the Mining, Oil and Gas industry is forecast to be at a HIGH level over the outlook period.

The main risk factors are:

- » a higher level of revenue volatility implies greater industry risk;
- » the fact that the industry is in decline stage of its life cycle; and
- » high level of competition

MAJOR PLAYERS IN MINING, OIL AND GAS

The industry is dominated by a small number of large mining companies, which typically operate globally:

- » Rio Tinto
- » BHP Billiton
- » Xstrata and
- » Fortescue Metals Group



WHAT ABOUT COMPETITIVE ACTIVITY?



There is a medium level of barriers to entry and medium industry assistance. The cost of entry into the industry can be high when specialised products are being produced, but it is relatively easy to enter the lower end of the industry.

There is a low, but increasing level of exports and a high and increasing level of imports. The market for generic products is being increasingly penetrated by imports from countries with low labour costs.

The average risk score for all Australian industries is expected to be in the HIGH band.

The level of risk in the Mining, Oil and Gas industry will be higher than that of the Australian economy.



CONCLUSION

The key findings from conducting our Steel Efficiency Review® on businesses serving the Mining, Oil and Gas Sector, show the need for:

OPTIMISATION OF INVENTORY LEVELS TO IMPROVE PRODUCT DELIVERY SCHEDULES AND QUALITY ASSURANCE TO ENSURE FIT FOR PURPOSE PRODUCTS.

When speaking to 92 steel businesses involved in Mining, Oil and Gas nationwide, we concluded that it comes down to 3 key success factors:

- **STOCK OPTIMISATION TO IMPROVE PRODUCT DELIVERY SCHEDULES**
- **QUALITY ASSURANCE AND CERTIFICATION TO ENSURE PRODUCT IS FIT FOR PURPOSE, REDUCING EXPOSURE AND RISK**
- **LAYOUT AND FLOW IMPROVEMENTS TO ELIMINATE BOTTLENECKS AND MACHINE DOWNTIME**

The Steel Efficiency Review® has identified savings for these customers in Processing (71%) with key findings ranging from additional processing work involving third parties to additional processing work conducted by our operations, transportation (44%) with key findings ranging from freight support to improvements in scheduled freight; and inventory from freeing up warehouse space to labelling and packaging product with quality checking processes (58%).

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STEEL EFFICIENCY
REVIEW®



APPENDIX 1: KEY INTERNAL ISSUES

ISSUE

Major players in Mining are focusing increasingly on innovative products and services to differentiate from those of competitors.

QUESTIONS

How do you differentiate your products from competitors? What steps do you take to maintain or improve your competitive edge in the market? What potential markets can benefit from you developing a new product niche?

ISSUE

The ability to achieve a low-cost production status through economies of scale is a distinct advantage within this industry as it has many standardised products that are produced for a mass market.

QUESTIONS

Do your operations benefit from economies of scale? What opportunities are available to increase the scale of your business? What are the costs associated with growing the scale of your operations?

ISSUE

The ability to source reliable and cost-effective inputs provides reliability and cost-effectiveness in the wider market. Major players in Mining achieve this through scale and organic growth.

QUESTIONS

How has the availability of raw materials affected your cost structure? How vulnerable are you to shortages in your main input materials? What steps can you take to secure large amounts of high-grade input resources?

APPENDIX 2: KEY EXTERNAL IMPACTS

ISSUE

Changes in the technology in the sector which favour substitute materials, have an effect on demand for the industry's products.

QUESTIONS

How has competition affected your product and services portfolio? What strategies do you use to minimise competition?

ISSUE

An increase in the price of raw materials pushes up the cost of production for mining companies, and these increases tend to be passed on to consumers in the form of higher prices, which pushes industry revenue up. Rising input prices can erode profitability if price rises can't be passed on in full.

QUESTIONS

How have raw material prices affected the revenue and profit margins? How did price fluctuations affect demand from your customers?

ISSUE

Trends in mining, oil and gas have a direct effect on the demand for raw materials.

QUESTIONS

How did these fluctuations affect your profit margins? What can you do to protect yourself from external factors?



THE STEEL EFFICIENCY REVIEW® - TURNING STEEL INTO GOLD

CASE STUDY 01 > GEKKO SYSTEMS

“Our recent Steel Efficiency Review® has strengthened our ability to deliver for Gekko Systems.”

Ben Carey - Bluescope Distribution.

Gekko Systems has come a long way since husband and wife team Sandy Gray and Elizabeth Lewis-Gray set up shop in a small Victorian town in 1996. Growing to a leading global supplier of mineral processing equipment with operations in North America, South America and South Africa, they know a thing or two about what works.

Sandy's designs are breakthroughs in the field of mineral processing, with over 400 of his inventions installed at mines in 40 countries worldwide including Gekko's patented systems such as the InLine Pressure Jig, InLine Leach Reactor and the Python modular plant. Sandy has also won multiple awards for his work, including the prestigious Clunies Ross Award, Australia's pre-eminent award for scientists, technologists and innovators, and holds memberships on bodies including the CSIRO Mineral Resources Sector Advisory Council.

“Our developments have the potential to significantly improve financial returns, which is why we believe Gekko will play an important role in the mining industry's future,” Sandy said. “Despite our youth, the company has built outstanding teams of specialists who are passionate about producing timely, high-quality products and services for our customers.”

On the ground at Gekko Systems' Ballarat headquarters, this dedication to customer service and satisfaction is greatly assisted by the support of BlueScope Distribution, as Gekko Systems' Manufacturing Planning Team Leader, Phil Amoore, can attest.

“Our partnership with BlueScope Distribution over the last 16 years has been a very fruitful one which has made our task of delivering on projects so much simpler,” Phil said. “They are able to work with short lead times and still deliver in a timely fashion which helps us meet a busy delivery schedule when multiple projects are on the go”.

“We issue the orders to BlueScope Distribution and they consistently deliver when we want it and how we want it, with the steel supplied

to us in a kit basis, cut to size, which eliminates waste and supports one of Gekko's core values of working in a LEAN manufacturing environment.”

Our recent Steel Efficiency Review® has strengthened our ability to deliver for Gekko Systems in kit form for five ILR5000 InLine Leach Reactors, predominantly used for mineral separation in gold mining, and required for a Russian mining operation.

“We had a 22-week build time which started two weeks before Christmas, so it's been a mad rush with closures over the holiday season,” Phil Amoore said. “The longest piece we needed was 11 metres and the finished product, with tanks on top, is about 12 metres high and over two metres wide, so this has been no small task for BlueScope Distribution.

“With BlueScope Distribution's assistance the project stayed on track and all five units are now on their way to Russia.”

BlueScope Distribution's Ballarat Account Manager, Ben Carey, is equally enthusiastic about the team effort between BlueScope Distribution and Gekko, particularly in relation to the latest project.

“This has been a big, complex project with tight deadlines. Meeting the challenging schedule has relied heavily on working closely with the team at Gekko,” Ben said. “But they are great people and the spirit of co-operation in both companies has enabled us to play our part in helping Gekko be successful with this important business opportunity.”

For more information visit www.gekkos.com



THE STEEL EFFICIENCY REVIEW® - TURNING STEEL INTO GOLD

CASE STUDY 02 > SHEETMETAL SOLUTIONS

“We’re completely committed to continue using BlueScope Sheet Metal Supplies as a supplier.”

Grant Williams- Sheetmetal Solutions

For over eight years, Sheetmetal Solutions as a job shop has been fabricating high-quality sheetmetal supplies and metal components for a number of different engineering businesses in the transport, construction and mining industries from their facility at Riverstone, NSW.

Along with supplying premium quality steel products to Sheetmetal Solutions, BlueScope Sheet Metal Supplies conducted a Steel Efficiency Review®.

The SER® recommended ways to improve the business’s stock management cycle and will enable them to tighten production times when they move to bigger premises early next year.

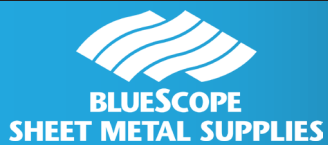
“The SER® allowed us to ask Sheetmetal Solutions about offcut management and the layout of their new factory. In consultation with BlueScope Sheet Metal Supplies, they will be able to revise their current stock management system to become more grounded in the principles of Lean production. We worked with them and came up with a system which will allow steel offcuts to be clearly identified, labelled and tracked.” Tim Mason from BlueScope Sheet Metal Supplies said.

BlueScope Sheet Metal Supplies SER® recommendations for the workshop layout at Sheetmetal Solutions’ new premises will bring machinery and appropriate personnel closer together, creating a more ergonomic and productive environment by reducing the time spent fetching certain tools.

“The Review was a success as it gave BlueScope Sheet Metal Supplies the opportunity to lend its Lean expertise to Sheetmetal Solutions” Grant Williams from Sheetmetal Solutions said. Sheetmetal Solutions appreciated BlueScope Sheet Metal Supplies’ input after conducting the Steel Efficiency Review® as it broadened their perspective on stock and offcuts management at a critical time.

“We’re completely committed to continue using BlueScope Sheet Metal Supplies as a supplier as it will allow us to guarantee our customers that the products we’re producing are made from first-grade Australian-made steel” Williams said.





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