SHU POWDERS

CORPORATE SUSTAINABILITY REPORT

2018

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Introduction

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Shu Powders produces various fine Cobalt powders for the global hard metals, diamond tools and battery industries. Shu Powders manufacturing site is located at Cato Ridge, near Durban, South Africa, since 2008.

This is Shu Powders' forth Corporate Sustainability Report in South Africa. This report highlights our corporate sustainability performance in consecutive years since 2012. Our reporting focuses on the health and safety, environmental, and social responsibilities critical to our key stakeholders including shareholders, customers, employees, local communities, governments and suppliers.

We are a reputable manufacturer - committed to continual improvement in safety, health and environmental performance. This is non-negotiable in our drive towards Zero Harm.

- We believe that all injuries and environmental incidents are preventable;
- The safety of our employees, visitors and contractors is a non-negotiable value;
- We are committed to the protection of the environment, including the prevention of pollution, and
- Leaders at all levels in the organization are role models in the management of safety and environmental matters.

Shu Powders affirms the central importance of sustainability for communities, in the present and the future, for the integrity of human beings, culture, society, economic wellbeing, environmental responsibility and the way of life of the people.

In October 2016, Jingmen GEM Co Ltd. from Hubei China became the leading shareholder in Shu Powders Ltd. GEM was founded in 2001 and is the first stock listed recycling company in China employing over 6000 people in 14 circular economy industrial parks. The Jingmen plant is a certified national education centre for circular economy and open to the public. GEM's philosophy is "Limited Resources, Unlimited Recycling". GEM actively advocates "Urban Mining".

Facing the reality of limited resources and environmental degradation, GEM is eager to build more recycling factories to reduce more waste and recycle more resources. Shu Powders is GEM's first overseas investment. GEM has plans for China-Africa Circular Economy Industrial Park in South Africa in a second step. GEM signed a Memorandum of Understanding with the local authorities, Trade and Investment Kwa Zulu Natal (TIKZN) in Dec 2016. It is intended that this factory will also recycle Cobalt and Nickel residues for Shu Powders' customers. A follow-up meeting with the premier of the province Kwa Zulu Natal was held in August 2017 in order to further intensify the relationships between the provinces of Kwa Zulu Natal and Hubei. Meanwhile other overseas companies have shown interest to join the project.

GEM's Corporate Social Responsibility Report is available on-line at www.gemchina.cn. In 2016, this 4-star report was ranked 6th by the Shanghai and Shenzhen Stock Exchange. For more information see also pages 23 and 24.

Executive Summary

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Shu Powders maintains an integrated SHEQ management system based on ISO 9001:2015 for Quality, ISO 14001:2015 for Environment, and OHSAS 18001 for Health and Safety. Apart from the international standards, Shu Powders is a four-star company according to the NOSA star grading system in South Africa. In 2019, Shu Powders is in the process of transitioning from OHSAS 18001 to ISO 45001.

Shu Powders have got a vision for a dust- free work environment - to attain this goal, substantial investments in automated machinery have been made, this includes the automated feeding machinery, the automated packaging process, and the state-of-the-art pneumatic powder transfer technology, which is awaiting installation. The combination of these technologies is aimed at reducing dust levels to below the legal Occupational Exposure limit of 0.1 mg/m^3. A move towards cleaner manufacturing will significantly reduce exposure of employees to dust; this will allow for the use of more comfortable paper dust masks rather than the current full face masks – thus improving the operators quality of work life.

Shu Powders Ltd has been sourcing Cobalt raw materials through its related companies GEM Co. and SMR Ltd. SMR is sourcing from Ambatovy, Madagascar (owner: Sherritt, Sumitomo, Kores) and Goro, New Caledonia (owner: Vale Inco). GEM Co is sourcing from Glencore's Mutanda's operation in the DRC and from Cobalt scraps. GEM is a world leader in Cobalt recycling. The Glencore - GEM supply has been reported in a Metal Bulletin article on March15, 2018. GEM has signed a long-term strategic procurement contract with Glencore, securing more than 50,000 MT of cobalt in form or intermediates for the following three years. Also, GEM became member of the RCI, Responsible Cobalt Initiative on May 16, 2018.

Highlights	Previous priorities
• No environmental complains and fines from neighbours and authorities • Environmental Purchasing Requirements were incorporated into the procurement process. This is also extended upstream the supply chain. • Maintaining the NOSA 4 - Stars. • Successful ISO surveillance audit (ISO 14000, 18000 and • The General Machinery Regulations (G.M.R) Section 2.1 appointment was finalized. • Preparation of migrating from OHSAS 18001 to ISO 45001. • A clean-up at Durban South Beach was conducted as part of celebrating the Mandela day. • Risk Assessment reviews were conducted on safety-critical processes such as loading of goods and blender loading and off-loading.	• Migration from OHSAS 18001 to ISO 45001 • Zero exceedances in Cobalt in Urine and Cobalt in Blood
Lowlights	**Priorities for 2019**
• One employee had his Cobalt in blood exceeding recommended limits. • There was one Lost Time Injury.	• Zero exceedances in Cobalt in Blood and in Urine • Zero Lost Time Injuries. • Successful implement of the Zero Tolerance/ Zero Harm project, including cardinal rules for health and safety on site. • Successful completion of customers' code of conduct audits • Treatment of Co containing wash water.

Key Performance Indicators (KPI)

Health & Safety
Environmental
Social

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Description	Targets / Limits		Year 5 Actual	Year 4 Actual	Year 3 Actual	Year 2 Actual	Year 1 Actual	5 Year Trend
Bio monitoring (No. of Co in blood non-conformances)	0		1	2	1	3	6	
Dust monitoring between work stations (mg/m^3)	<0.1*		0.001	0.006	0.01	0.02	0.08	
Dust monitoring at work stations (mg/m^3)	<10*		0.01	0.01	0.4	0.6	1.1	
Dust fall out – general ($mg/m^2/day$)	<1200*		13	15	22	135	97	
Dust fall out - Cobalt ($mg/m^2/mth$)	<2		0.13	0.18	0.2	1.3	0.8	
Lost time incidents (No.)	0		1	0	1	0	3	
Noise (dB)	<85*		78	n.a.	78	81	83	
Water consumption (l/kg Co)	≦10		6.8	8.7	6.9	8.1	8.4	
Electricity consumption (kWh/kgCo)	≦7		8.4	8.5	6.8	7.3	7.0	
Fuel consumption (ml/kg Co)	≦5		1.0	5.0	0.0	10.1	16.7	
Hazardous waste (g/kg Co)	≦30		19	25	38	55	52	
Environmental incidents & complaints (No.)	0 0		0 0	0 0	0 0	1 0	0 0	
Employment permanent (%) Employment temporary (%)	≧90 ≦10		100 0	92 8	100 0	100 0	90 0	
Training (Hrs per employee)	≧60		20	29	84	67	57	
Contribution to community (% of EBITDA)	≧0.4		0.5	0.45	0.4	0.4	0.4	

(*) -referring to legal limits

Health and Safety

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Bio-Monitoring

Bio-Monitoring of chemical exposure in the workplace is of critical importance in the assessment of health risks and forms an integral part of the company overall occupational health strategy. We consider biological monitoring as an important tool in the prevention of occupational diseases related to those exposed to chemicals on a regular basis. A complete medical programme is in place consisting of Pre-employment, Annual, and Exit medicals for all employees – on contract and permanent. All the medicals consist of the following examinations:

- Physical examination
- Eye Test
- Audiometric Testing
- Chest X-ray
- Lung Function
- Cobalt in Urine and Blood samples

Only one employee had his Cobalt in Blood exceeding the recommended levels of 25mg/L. The employee was removed from exposure and a thorough Root Cause Analysis comprising of the Occupational medical practitioner, the area's Health and Safety Representative and the area's Manager. The Root Cause Analysis is followed by a review of current control measures, safe work procedures, and a refresher training on proper PPE use and hygiene. This incident resulted in the formation of a Hygiene committee, a team of people monitoring employees' personal hygiene, and these include Health and safety representatives and Shop Stewards.

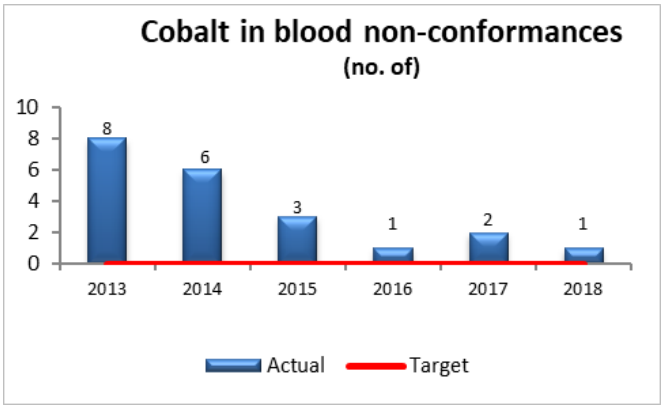

Fig 1. Cobalt in blood non-conformances: Number of non-conformances has decreased slightly from a two incidents in the previous year to one in the current year. This sets our efforts to zero in the forthcoming year.

Health and Safety

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Occupational Hygiene Surveys

The following hygiene surveys were conducted by an Approved Inspection authority (AIA):

- Hazardous Chemical Substances Monitoring (HCSM),
- Hazardous Chemical Substances Risk Assessment (HCSR),
- Illumination, Noise, and Ventilation.

No major findings were raised; a Corrective Action Plan was developed to address the findings.

Dust Monitoring

Cobalt dust monitoring is taking place daily on a continuous basis. This is a Shu Powders initiative to complement the two-yearly surveys done by an AIA. Baseline data (before control measures) is compared to data collected after the implementation of control measures – two new crushers were installed as engineering interventions a result of information from the daily monitoring.

Dust levels are shared amongst all employees at the Daily Management System (DMS) meeting – these are daily meetings attended by all employees in each department every morning prior to commencement of work. Figures exceeding the OEL are discussed and potential causes are identified. Adherence to safe work instructions is discussed.

Fig 2. Employees attending the DMS.

Health and Safety

Dust Monitoring

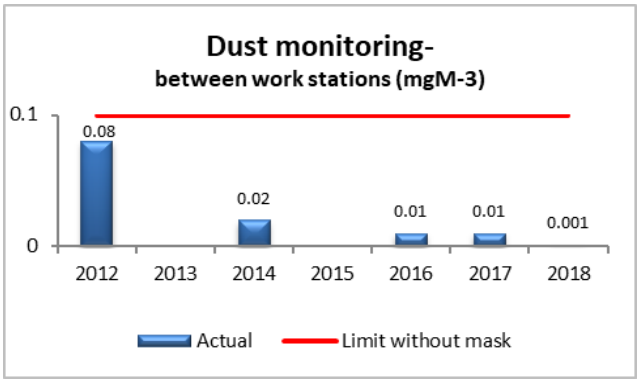

Fig 3: Dust Monitoring between Work Stations: The 2018 figure is from internal monitoring and shows dust levels at as low as less than 10% of the OEL between work stations. The daily dust monitoring made it easy to establish Cause and Effect relationships between the different factors and the levels of dust. This facilitates easy identification of control measures.

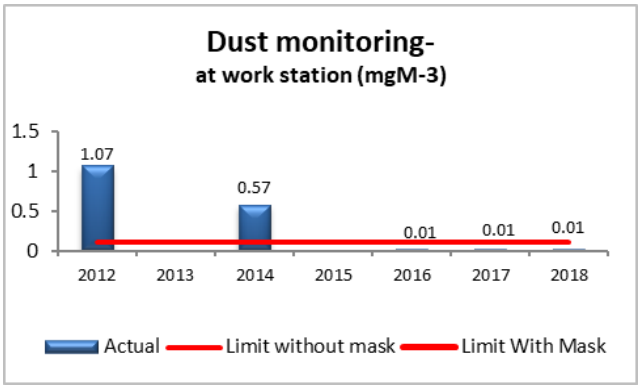

Fig 4: Dust Monitoring at Work Stations: The dust level at works is reducing year on year. The 2018 figure is from internal monitoring – the levels 10% of the OEL. The Action threshold is 50% of the AEL.
There are instances whereby the dust levels exceed the recommended levels resulting in outliers in the data. These are investigated and corrective actions are put in place.

Health and Safety

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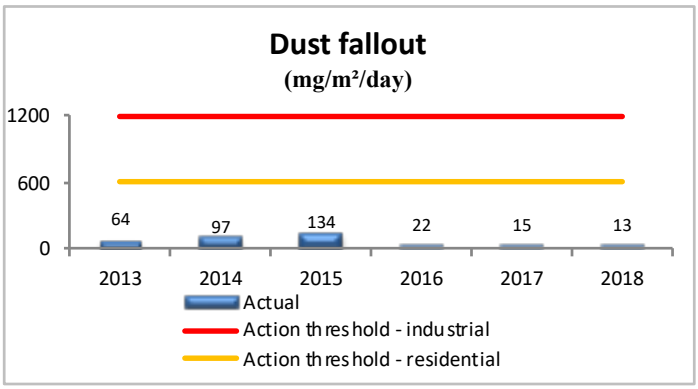
Dust Fallout

Gravimetric analysis of the exposed dust fallout buckets for dust deposition rates are completed by an accredited laboratory – Chemtech Laboratory Services and sent through to ROHS Environmental Engineering (Pty) Ltd for interpretation. Exposed dust fallout buckets are collected at the end of each month and the dust filtered through a sub-micronic, pre-weighed filter using a vacuum filter bench. The filters are oven dried for about 90 min before cooling in a desiccator for at least an hour (SANS 1137:2012) and then reweighed to ascertain the collected mass (insoluble particulate). For this monitoring period, the exposure period does comply with the standard operating procedure of 30±2 days (SANS 1137:2012) - data recovery was 100 %.

The dust deposition records observed are compared against the relevant standard.

Band Number	Band Description Level	Dust fall rate (D) (mg.m2.day, 30-day average)	Comment
1	Residential	D < 600	Permissible for residential and light commercial.
2	Industrial	600< D <1,200	Permissible for heavy commercial and industrial.
3	Action	1,200< D <2,400	Requires investigation and remediation if two sequential months lie in this band, or more than three occur in a year.
4	Alert	2,440 < D	Immediate action and remediation required following the first incidence of dust fall rate being exceeded. Incident report to be submitted to the relevant authority.

Table 1. shows the specifications/ restrictions with regard to dustfallout. **Reference:** SANS 1137:2012. Standard test method for collection and measurement of dustfall (settleable particulate matter).



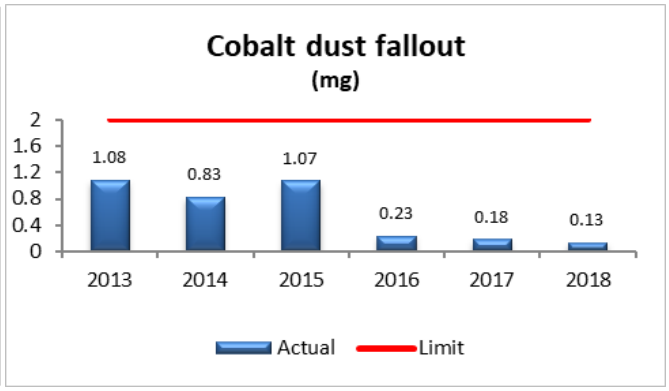


Fig 5 & 6: General Dust Fallout: Dust Fallout is well below the established limits. The dust levels have dropped as construction work at neighboring sites is completed.
Cobalt dust fallout is controlled from the source, that is, by eliminating and reducing fugitive dust generation at work stations and ensuring high efficacy of emission control measures.

Health and Safety

Lost Time Incidents

Shu Powders is committed to the health and safety of its employees, visitors and contractors, this includes the protection of the environment and the prevention of pollution, and the protection of property against damage. The target for SHEQ incidences is Zero. This commitment is demonstrated by various ways among them, leading by example, formal training given to employees; awareness through tool box talks, posters, the safety day. For every incident which occurs, a Root Cause Analysis is carried out to find a lasting solution to the incident.

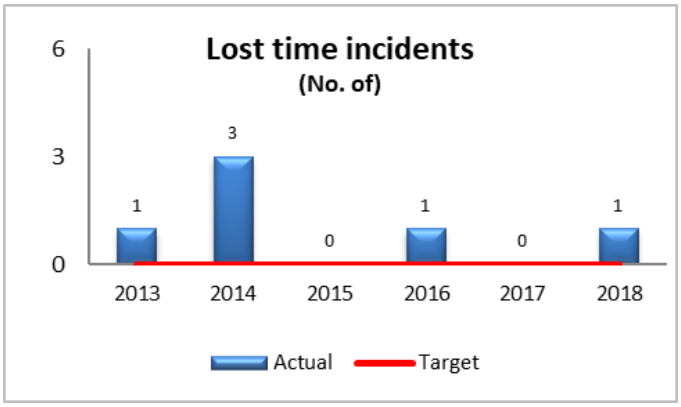


Fig 7, LTI: An employee fell from height and injured his collar bone. An in-depth RCA was conducted and culminated into the Zero Tolerance/ Zero Harm change management project launched by the SHEQ department. The objective of this project is to change the SHE culture on site.

Lost Time Incidents since 2013:
In 2016, Shu Powders started monitoring the number of days free from lost time injuries as one of the indicators of SHE performance.

- On 28 November 2016 an employee experienced some eye irritation. He was taken to a medical Doctor and the Doctor confirmed that the employee was alleged to Ammonia vapour. The employee was booked off-sick for a single day.
- There was no Lost Time Injury recorded in 2017, setting days without an LTI at 398 , since the incident on Nov. 2016.
- In June 2018, an employee fell from height in the course of doing work. He was taken to hospital and booked off sick.

Health and Safety – NOSA Performance

Lost Time Incidents

In addition to the OHSAS 18001 system that forms part of the Integrated Management System, Shu Powders also implements the NOSA CMB 253N Standard of Health and Safety. South Africa is the origin of this standard and it is spreading across the globe as one of the flagships in H&S. Performance is a function of the Effort Score and the DFR (Disabling Frequency Rate) and is given a rating on a Five –Star scale. The 5-Star is the highest ranking, and an organization that achieves consistently the 5-Star is elevated to the NOSCAR – which is the highest grade an organization can achieve.

Shu Powders has scored 4-star for three straight years since the year 2015. There was a significant improvement in the Effort score from 81% to 88%. The final score is a function of the Effort score and the DIFR.

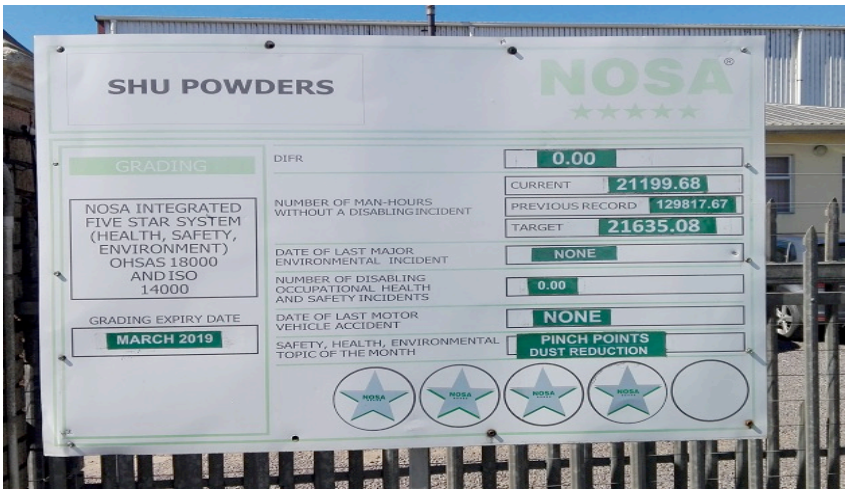


Fig 8a. A board at the site entrance of displaying SHE statistics and the 4 Stars.

We pride ourselves with our current 4_Star grading – having had one Lost Time Injury in the year and looking forward to a 5 Star in the year 2019.

Environmental

Water consumption

The importance of saving water cannot be over emphasised, South Africa faces significant water challenges due to the combination of its rapidly growing population and increasingly unreliable rainfall patterns due to climate change. The water problem is further exacerbated by the fact that South Africa is a relatively dry country, with an average annual rainfall of about 464mm (compared to a world average of about 860mm).

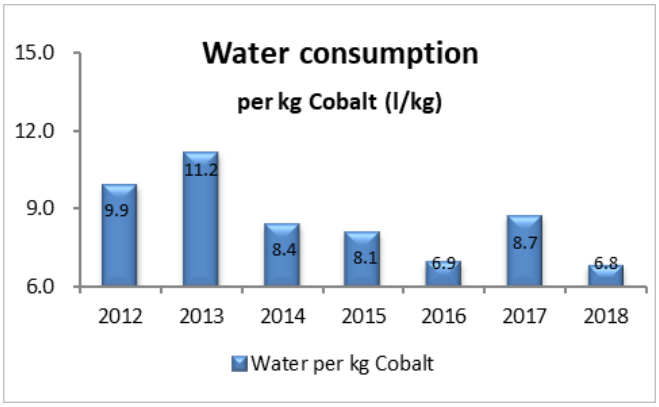


Fig 9, Water consumption: Water consumption decreased by 21% in 2018. This is due to reduced de-icing and also reduced use of water during the de-icing of Ammonia tanks.
There is a Lean Project whose objective is to use heat from the stacks for heating purposes. This will eliminate the use of water in de-icing.

Electricity consumption

The year 2016 recorded the lowest electricity consumption per kg cobalt produced since 2013. This is attributed to mainly to SHU9 - a Lean project aimed at exploiting the '*opportunity to reduce conversion costs by reducing energy cost & consumption through improved process control, better demand management, power factor correction*'.

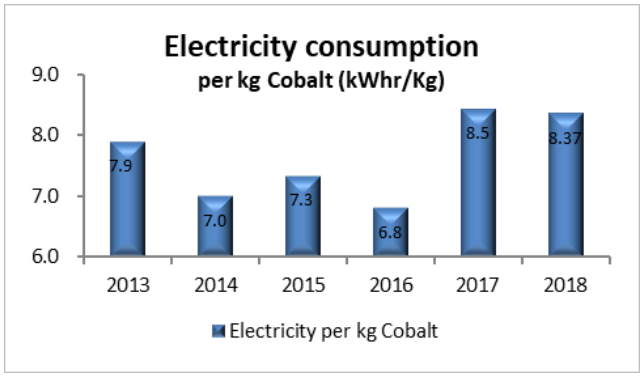


Fig 10, Electricity consumption: The electricity consumption increased 25% in 2018 vs 2016. Compressors are a high electricity consumer. Compressor power and operating hours are being reduced in 2019.

Environmental

Fuel consumption

Diesel fuel is used as an alternative energy source to power a stand-by generator due to persistent load shading on the national electricity grid.

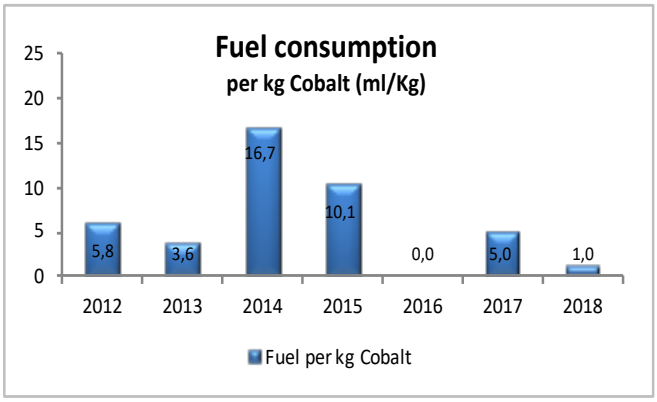


Fig 11, Fuel consumption: In 2018 we had some short periods of power outages, but far much better than the stage 2 load shading implemented by the sole power utility entity, Eskom, in 2017.

Waste Management

Separation-at-source is the heart of recycling. Shu Powders has done just that in an effort to improve recycling and avoid waste to the landfill.

Pict 1. General waste: Non-hazardous plastic waste is recycled. A local recycling company collects the plastic and converts it into different usable components, e.g., refuse bags. A site visit was done to see how Shu's waste is being handled.

Environmental

Waste Management

The recycling of pallets was a major success in 2016. More initiatives were put in place to reduce the generation of waste, these included considering the re-order levels of some consumables. Post use, alternatives for reusing and recycling have been sought – from 2018 all uncontaminated plastic waste is send to a recycler, before it was disposed of as general waste – this has the effect of avoiding the landfill and also reducing transportation costs.

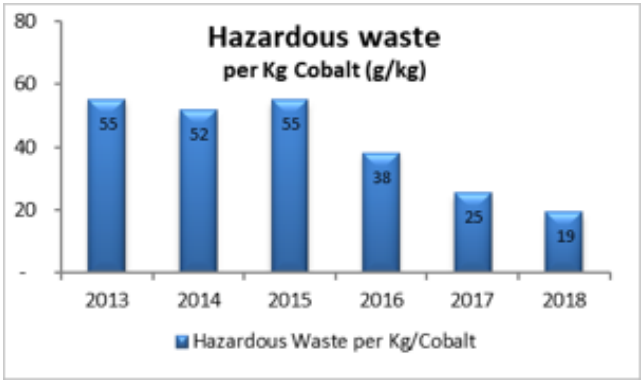


Fig 12, Hazardous waste: Separation-at-source contributed immensely to the reduction in hazardous waste levels. The target for 2018 is to reuse the Hessian big bags.

Pic 2, Raw Material Pallets: Pallets which come with Raw Material are cleaned and reused in non-food packaging.

Raw Material bags recycling.

Pic 3. Raw material bags on pallets laden with material.

Pic 4. Empty bags are washed then sold to non-food packaging applications. The washing water is tested for any residual material before the bags are declared fit for sale.

Environmental

Incidents and Complains

Shu Powders has an obligation to ensure that we comply to all legal requirements and satisfy expectations – from both the authorities and other interested parties. Our environmental friendly operations have seen us being in peaceful co-existence with communities around us, neighbours, the authorities and employees, registering zero complaints since 2016.

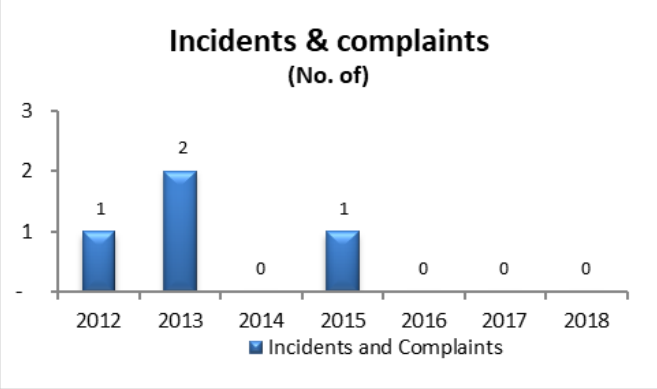


Fig 13, Incidents and complaints: The overall trend is positive as there was no complaint since 2016.

Incidents:

- 2018 – there was no environmental incident or complaint.
- 2017 – there was no environmental incident or complaint.
- 2016 – there was no environmental incident or complaint.
- 2015 - Jun, a valve on the ammonia surge tank was mistakenly open leading to the release of some ammonia vapour.
- 2014 - no environmental incidents.
- 2013 – Dec, the lab conservancy tank was full and as a result the drains were filling up. 5000 Litres of the contents were pumped into a bulk plastic tank. The liquid effluent was eventually collected by an accredited waste removal company.
- 2013 – Feb, a maintenance operator was decanting used oil into a 210 Litre drum and spilled a small amount of oil which ran along the storm water drain. The oil was later cleaned and Corrective and Preventive Action plan was implemented.

Corrective and Preventative Action Reports were raised for each incident.

Social

Employment

The year 2018 was very dynamic with regard to the workforce. Shu Powders maintains a 100% permanent contracts to its regular employees. All employees are

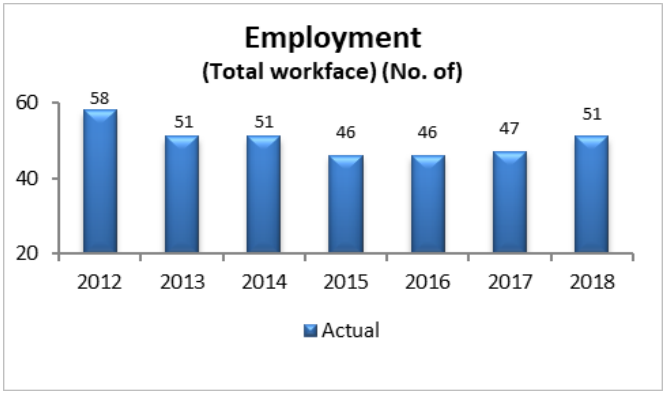


Fig 14, Total workforce: total work has has increased as some temporary contracts became permanent.

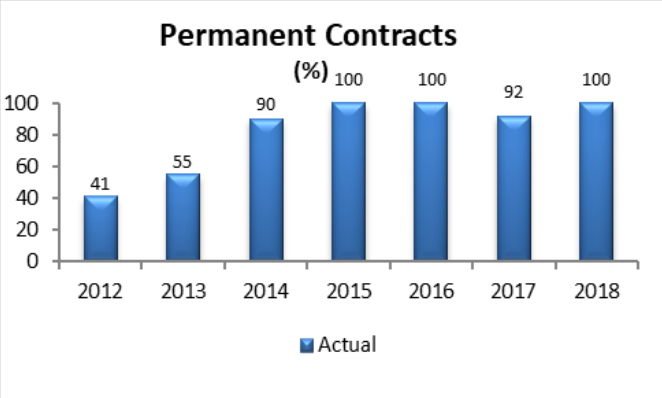


Fig 15a, Employment full time: All Shu Powders employees are on Permanent contract basis. This is part of Shu Powders' ways of caring about its workforce and the community from which they come – by providing stable employment.

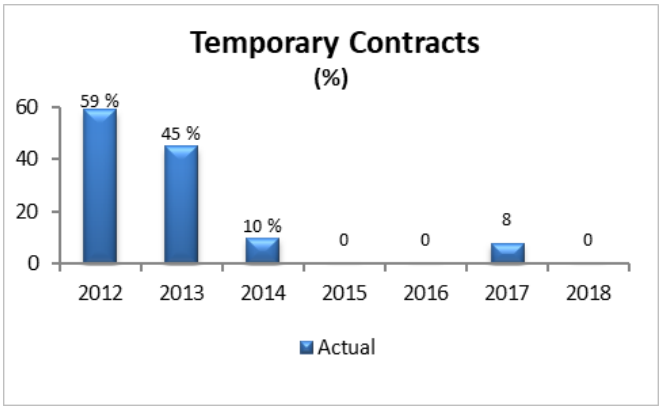


Fig 15b, Employment contract: There are no employees on temporary contracts.

Social

Training

Shu Powders maintains a robust training and development program that ensures that employees have a consistent experience and background knowledge. Shu Powders is enjoying these benefits out of training;

- Improved employee performance
- Improved employee satisfaction and morale
- Addressing of weaknesses
- Increased productivity and adherence to quality standards
- Increased innovation in new strategies and products
- Reduced employee turnover
- Enhanced company reputation and profile

Apart from HSE compliance training, Shu Powders has changed its approach to more strategic, long term courses, which empowers employees with higher skills. This empowers employees, giving them more control over their jobs, especially machine operators. This addresses such issues as breakdowns, and call outs.

Fig 16, Training: There was a sharp decrease in training hours due to focus on strategic training - this involves enrolling selected employees to tertiary institutions of learning in order to acquire higher skills. Also most of the HSE compliance certificates are valid for three years from 2016 hence there was very little SHE refresher training.

Social

Contribution to the local community

On the 29th of June, the entire Shu Powders workforce embarked on a trip to Durban. The entire team proceeded to the blue Lagoon beach where they did a clean-up of a 500m stretch. The event was also graced by the KwaZulu natal Sharks board - an organization that maintains a "shark control" program off the coast of KwaZulu-Natal Province. All this was in commemoration of the Mandela day.

Constant engagement with the community offers Shu a great opportunity to understand the people giving us a greater sense of belonging with shared values, norms and meanings.

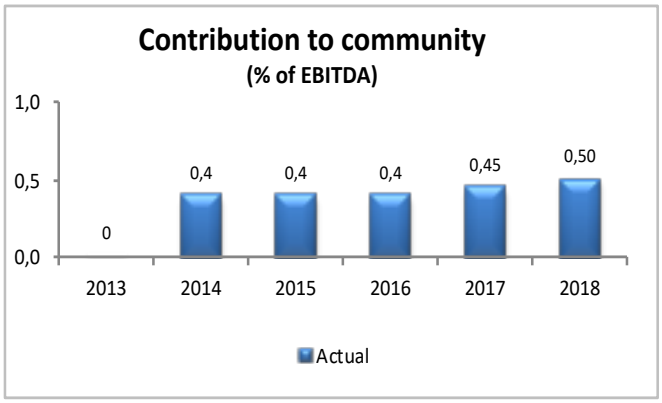


Fig 17, Contribution to the community : Shu's net contribution to the community has surpassed our target of 0.4%. 2018 was also a successful business year.

Pic 5a, Refuse bags full of litter are assembled at a collection point for pick-up to a safe-disposal site.

Pic 5b. After a day's hard work, Shu Powders staff pose for a photo.

Pic 5c. Shu Powders employees combed a 500m coastline, picking-up litter and debris.

Raw Material Sourcing

DR Congo issues

On January 19, 2016, Amnesty International published a report titled "This is What We Die For", outlining allegations against companies directly involved in the trade of cobalt sourced from artisanal mining as well as against some of the world's largest technology firms down the supply chain. [Ref 4] In the report Amnesty documents human rights abuses in DRC's artisanal cobalt mining sector such as child labour and hazardous and unhealthy working conditions (Fig 23).
In November 2018, Amnesty International published a follow-up report: "Time to Recharge" – Corporate action and inaction to tackle abuses in the cobalt supply chain. Many downstream companies have been slow or resistant to adopt clear policies for due diligence in their cobalt supply chains.

Pic 6, Amnesty International Report: A video clip is available under http://youtu.be/7x4ASxHlrE

Pic 7, Amnesty International Follow Up Report: Some corporations have taken action since 2016 but many others have not.

Note:

- On March 29, 2016, the London Metal Bulletin published articles stating that China's refineries imported almost a quarter of million tonnes of cobalt concentrate from the DRC in 2015, according to China import statistics. [Ref 5]
- These concentrates have been produced in dangerous conditions or by children in artisanal mines in the DRC.
- Six companies from China have been identified to import at total of over 10000 MT of cobalt concentrate in 2016.
- Among these six companies is the cobalt powder producer **Nanjing Hanrui**.

Raw Material Sourcing

DR Congo issues

Throughout the cobalt supply chain an increasing number of companies have started to focus on responsible sourcing and supply chain due diligence. In addition to battery consuming companies in the electronics and automotive industries, upstream companies in both the refining and mining sectors are showing more active engagement by initiating supply chain mapping and industry audit programs.

Fig 18, Initiatives insure materials are mined and sourced in accordance with the due diligence guidance on human rights as set forth by the OECD

- The Responsible Cobalt Initiative (RCI): initiated in 2016 by the China Chamber of Commerce of Metals, Minerals and Chemicals Importers and Exporters (CCCMC), with support from the Organization for Economic Co-Operation and Development (OECD). RCI has over 30 members, including technology giants Apple Inc., HP, Huawei and Samsung, automakers like Volvo, Daimler and BMW and downstream refiners like Huayou Cobalt and GEM Group.
- The Responsible Raw Materials Initiative (RRMI): a joint initiative launched in 2016 and supported by downstream technology and auto companies like Dell, HP, Microsoft Fiat-Chrysler, General Motors and Renault. The RRMI aims to provide a supply chain risk management system that will facilitate downstream companies' ability to perform due diligence in line with OECD guidance.
- The Better Cobalt Pilot Project was launched in March 2018. Managed by UK based supply chain audit company RCS Global, the project electronically tags cobalt from five artisanal and semi-mechanised mines in a systematic attempt to trace the metal through the supply chain. The project is a collaboration between a number of unnamed consumer companies, two car companies and the world's largest refiner of cobalt, Zhejiang Huayou Cobalt.
- In 2017 the Cobalt Institute (CI) introduced the Cobalt Industry Responsible Assessment Framework (CIRAF). The project reached its pilot phase in August 2018 and seeks to identify material issues and risks within the cobalt sector from CI members as well as their customers.
- A cooperative pilot project was launched in December 2018 by BMW, BASF and Samsung SDI to support sustainable and fair cobalt mining initiatives in the DRC. German development agency GIZ is coordinating the project which explores how living and working conditions for ASM operations can be improved. The pilot is scheduled to last for three years and if successful will be applied to other mines.
- In January 2019, Huayou Cobalt together with Ford Motors, LG Chem, IBM and RCS Global launched a blockchain pilot project to trace and validate ethically sourced cobalt and to demonstrate the responsible production and processing of cobalt in the mine to battery supply chain.

Note:

- Shu's shareholder and supplier, GEM became member of the RCI, Responsible Cobalt Initiative on May 16, 2018.
- As world's second largest Co refiner GEM has entertained many compliance audits by large corporations such as Apple.
- As member of the Cobalt Institute, Shu participates in CIRAF as does Glencore.

Raw Material Sourcing

Shu Powders' Raw Material Sources - Mines

Shu has been sourcing Cobalt raw materials through its related companies GEM Co. and SMR Ltd. SMR is sourcing from Ambatovy and Goro. GEM Co is sourcing from Glencore's Mutanda's operation in the DRC and from Cobalt scraps. GEM is a world leader in Cobalt recycling. The Glencore - GEM supply has been reported in a Metal Bulletin article on March15, 2018. GEM has signed a long-term strategic procurement contract with Glencore, securing more than 50,000 MT of cobalt in form or intermediates for the following three years.

1. Goro In New Caledonia is owed and operated by Vale INCO www.vale.nc.
2. Ambatovy in Madagascar is owned and operated by a Sherritt, Sumitomo, Kores www.ambatovy.com
3. Mutanda in the DRC is owned and operated by Glencore www.glencore.com

Source 1 and 2 are Nickel mines and source 3 is a Copper mine, where Cobalt is produced as a by-product in the range of several thousand tonnes per annum. All companies are stock listed and compliant with OECD guidelines. There are detailed sustainability reports issued by all three companies.

Pic 8a, Goro: The facilities in New Caledonia are owned and operated by Vale INCO.

Pic 8b, Ambatovy: The facilities in Madagascar are owned by Sherritt, Sumitomo, Kores.

Pic 8c, Goro: Vale INCO issues a sustainability report every year, which is available on-line.

Pic 8d, Ambatovy: A sustainability report is issued every year and readily available on-line.

Raw Material Sourcing

Shu Powders' Raw Material Sources - Mines

GEM signs long-term cobalt supply deal with Glencore to lock in supply (METAL BULLETIN March 14, 2018)
GEM signed a long-term strategic procurement contract with Glencore, securing more than 50,000 tons of cobalt intermediates for the following three years - part of a growing trend of producers looking to lock in supply amid growing global tightness. GEM will purchase 13,800 tons of crude hydroxide from Glencore in 2018 and a further 18,000 tons and 21,000 tons in 2019 and 2020 respectively, with the total procurement amounting to 52,800 tons, it said in a statement on Wednesday March 14. The volume of cobalt hydroxide committed to GEM in 2018 will account for one third of planned output from Glencore's cobalt assets. The details of the pricing mechanism used the long-term contract was not disclosed.

Pic 9a, Mutanda: The facilities in the DRC are owned and operated by Glencore.

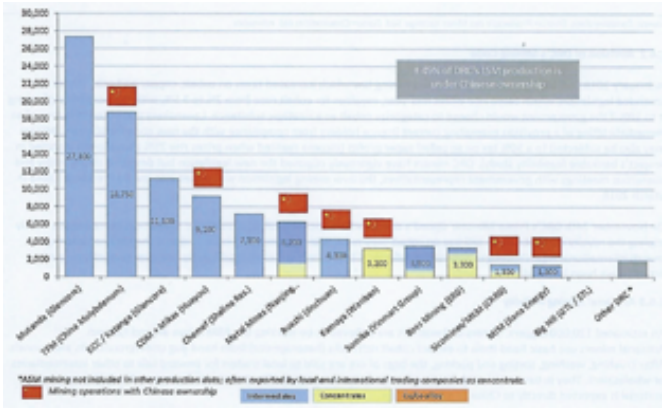


Fig 19, Mutanda: Mutanda is the largest Cobalt mine in the DRC and worldwide.

Pic 9b, Mutanda: Glencore issues a sustainability report every year, which is available on-line.

Fig 19b, Glencore: Glencore produced an estimated 27,300 tons of cobalt at Mutanda and an additional 11,100 tons at Katanga. Meanwhile, Glencore has announced to temporarily shut down Mutanda in 2019.

Raw Material Sourcing

Shu Powders' Raw Material Sources - Recycling

GEM originated from a green dream:

- On December 28, 2001, Professor Xu Kaihua founded GEM in Shenzhen.
- In 2003, the industrial concept of "limited resources and unlimited circulation" was put forward for the first time.
- On January 22, 2010, A shares were listed in Shenzhen Stock Exchange (stock code: 002340). China mined the first stock of "urban mines," renewable resources industry and electronic waste recycling industry.
- GEM owns total share capital of 3.816 billion shares, net assets of more than 7 billion yuan, wast reproduction value of more than 12 billion yuan, employees of more than 5,000 people.

GEM stands for "Green" "Eco" "Manufacturing":

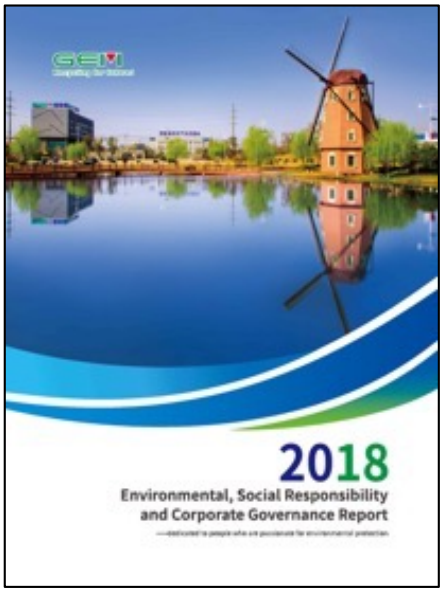
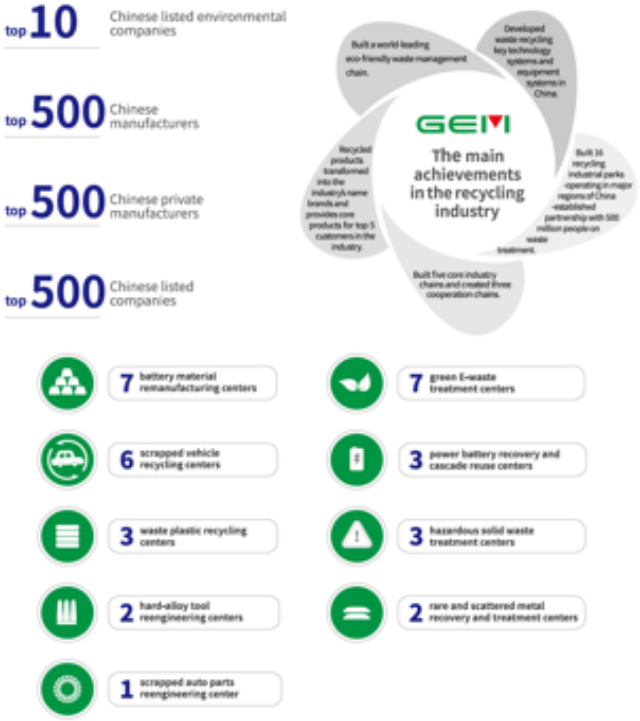


Fig 20, GEM Sustainability Report: A corporate sustainability report is issued every year, which is available on-line at www.gemchina.cn



Raw Material Sourcing

Shu Powders' Raw Material Sources - Recycling

Following the investment in Shu Powders Africa in Oct 2016, GEM signed a Memorandum of Understanding (MOU) with Trade and Investment of Kwa Zulu Natal (TIKZN) in Dec 2016. TIKZN represents the local government of KZN South Africa. GEM is planning to build a China-Africa Circular Economy Industrial Park in Durban. www.gemchina.cn/en/html/2016-12-26/313_4543.html

This recycling park will also be able to treat Cobalt and Nickel containing residues from hard metal scrap recycling – a service that Shu Powders Africa will be able to offer on a large scale in the future. See extract of MOU in 2016 sustainability report.

In August 2018, GEM organized an event for the government of Hubei represented by the Vice-Governor Fu Dehui and the government of Kwa Zula Natal represented by the Premier Willies Mnchunu. Both parties underlined their willingness to cooperate to their mutual benefit.

News

KZN Premier Willies Mchunu, second from right, and eThekwini city manager Sipho Nzuza, right, welcome delegates from Hubei province in China to a bilateral meeting at The Oyster Box, in Umhlanga, last night. PICTURE: MOTSHWARI MOFOKENG

Chinese to open more KZN factories

IN A bid to further develop strong business ties with Chinese businesses, the KwaZulu-Natal government yesterday hosted a delegation from the country's Hubei province.

"We are determined to take advantage of opportunities offered by being part of Brics," said KZN premier Willies Mchunu.

"Having hosted the Brics Summit we understand that this bloc is an organisation established to safeguard the interests of the so-called developing nations."

Mchunu added that Jingmen Hubei, a company from Hubei Province, would be opening two more factories, in Izinsikabheni and Umgababa, south of Durban.

This was in addition to a project in Cato Ridge where Jingmen Hubei has acquired a 60% stake in Shu Powders, a cobalt powder manufacturer.

"We have been informed that the two new factories will feature a large recycling park. The factories are expected to create up to 1 000 jobs which specialise in recycling end-of-life vehicles, electronic scrap, and rechargeable batteries."

Mchunu said the provincial government had launched a "grassroots mobilisation campaign" of waste collection focusing on recycling materials such as plastic, bottles and scrap.

"The scrap metal industry alone in South Africa is worth R15 billion to R20bn a year and has a potential to create more employment."

Mchunu said the provincial government was committed to working with the delegation to ensure much-needed jobs were created for local communities.

"We wish to work with Jingmen Hubei to identify opportunities for local SMMEs and black industrialists in particular to become major role players in the two new factories – either as suppliers or in the entire value chain of recycling."

He said the investment would benefit communities in areas such as Umbumbulu, KwaMakhutha, Mahuket, Adams Mission, Folweni and uMlazi. - Mercury Reporter

Pic 9b, Newpaper article: GEM and Hubei Province leadership meeting with Kwa Zulu Natal leaders in Durban.

Pic 9a, Ceremony group: GEM investment in KZN is in line with China's "One Belt- One Road" initiative. It also supports the green development policies in both provinces.

Certifications

25

Shu Powders holds ISO 9001:2008, ISO 14001:2004, and OHSAS 18001:2007 international standards. On top of these we also hold Four Stars on the NOSA Integrated Five Star System, CMB253N Standard.

These Integrated Management Systems give guarantee and confidence to our customers, employees, suppliers, the community and all other stakeholders on the quality of the product, the preservation of their health and safety, care for the environment and sustainable business.

Certifications

CERTIFICATE

This is to certify that

Shu Powders Africa (Pty) Ltd

Logna Industrial Park
No. 40 Track 84040
Harrison Flats, Old Main Road
Cato Ridge, 3680
KwaZulu Natal
South Africa

Has implemented and maintains an
Occupational Health and Safety Management System.

Scope:
Sales, Marketing and Production of Cobalt Powder.

Through an audit, documented in a report, it was verified that the Management System fulfils the requirements of the following standard:

BS OHSAS 18001 : 2007

Certificate registration no.	40601683 BSOH
Valid from	2018-05-28
Valid until	2021-03-11
Date of certification	2018-05-28

DAkkS

DQS GmbH

Stefan Heinzel
Managing Director

Accredited Body: DQS GmbH, August-Schanz-Straße 21, 60433 Frankfurt am Main, Germany
Administrative Office: DQS South Africa, P O Box 870, Randburg 2125 - South Africa

CERTIFICATE

This is to certify that

Shu Powders Africa (Pty) Ltd

Logna Industrial Park,
No. 40 Track 84040
Harrison Flats, Old Main Road
Cato Ridge, 3680
KwaZulu Natal
South Africa

Has implemented and maintains an **Environmental Management System.**

Scope:
Sales, Marketing and Production of Cobalt Powder.

Through an audit, documented in a report, it was verified that the Management System fulfils the requirements of the following standard:

ISO 14001 : 2015

Certificate registration no.	40601683 UM15
Valid from	2018-05-28
Valid until	2021-05-27
Date of certification	2018-05-28

IAF

DAkkS

DQS GmbH

Stefan Heinzel
Managing Director

Accredited Body: DQS GmbH, August-Schanz-Straße 21, 60433 Frankfurt am Main, Germany
Administrative Office: DQS South Africa, P O Box 870, Randburg 2125 - South Africa

CERTIFICATE

This is to certify that

Shu Powders Africa (Pty) Ltd

Logna Industrial Park
No. 40 Track 84040
Harrison Flats, Old Main Road
Cato Ridge, 3680
KwaZulu Natal
South Africa

Has implemented and maintains a **Quality Management System.**

Scope:
Sales, Marketing and Production of Cobalt Powder.

Through an audit, documented in a report, it was verified that the Management System fulfils the requirements of the following standard:

ISO 9001 : 2015

Certificate registration no.	40601683 QM15
Valid from	2018-05-28
Valid until	2021-05-27
Date of certification	2018-05-28

IAF

DAkkS

DQS GmbH

Stefan Heinzel
Managing Director

Accredited Body: DQS GmbH, August-Schanz-Straße 21, 60433 Frankfurt am Main, Germany
Administrative Office: DQS South Africa, P O Box 870, Randburg 2125 - South Africa

NOSA

★ ★ ★ ★ ★

GRADING AUDIT

This is to certify that

SHU POWDERS AFRICA (PTY) LTD

has been assessed by NOSA against the provisions of the

NOSA FIVE STAR SYSTEM

Occupational Health and Safety Management

NOSA NOSA NOSA NOSA

The Star Rating above and the Seal below, were hereto affixed in the presence of:

Manager

Certificate No: 1002

Date: 13 – 15 March 2018

Valid until: 12 March 2020

NOSA

CMC019

Certifications

ETHEKWINI MUNICIPALITY
Community and Emergency Services
Cluster –Health Unit

9 Archie Gumede Place
Durban 4001
P O Box 2443
Durban 4001
Tel: (031) 311 3614
Fax: (031) 311 3530
Website: http://www.durban.org.za

DATE: 26 October 2016
REF: AEL092/W2

This Atmospheric Emission Licence is issued to **SHU POWDERS LIMITED,** in terms of section 47(1) of the National Environmental Management: Air Quality Act, 2004 (Act No.39 of 2004) ("the Act"), in respect of Listed Activity **Category 7, Sub-category 7.1 and 7.4.** The Atmospheric Emission Licence is issued on the basis of information provided in the company's application dated **22 September 2016** and information that became available during processing of the application.

Licence Holder	**SHU POWDERS LIMITED**
Industry Sector	**Preparation of cobalt**
Physical Address	**Logra Industrial Park, 40 Track 94040, Harrison Flats, Old Main Road, Cato Ridge**
Validity Period	**1 November 2016 to 31 October 2021**

Air Quality Officer: eThekwini Municipality
Mr. B.G Dale

26/10/2016
Date

For Enquiries Contact Details: (031) 311 3575 Email: bruce.dale@durban.gov.za

Certifications

Health, Safety and Environmental Policy

SHU POWDERS T: +27 31 782 1061 F: +27 31 782 1160 W: www.shupowders.com

Shu Powders Africa PTY. LTD
Logra Industrial Park, No.40 Track 94040, Harrison Flats
Old Main Road, Cato Ridge, KwaZulu Natal 3680 South Africa
Postnet Suite 10015, Private Bag X7005, Hillcrest, 3650

Vat No: 4150236521 CK No: 2007/000665/07

SAFETY, HEALTH AND ENVIRONMENTAL POLICY

Shu Powders Africa is a reputable manufacturer of cobalt, and is committed to continual improvement in safety, health and environmental performance. This is non-negotiable in our drive towards Zero Harm.

- We believe that all injuries, all adverse health effects resulting from work activities, and environmental incidents are preventable;
- The safety of our employees, visitors and contractors is a non-negotiable value;
- We are committed to the protection of the environment, including the prevention of pollution.
- Leaders at all levels in the organization are role models in the management of safety and environmental matters;
- At-risk behaviors are not acceptable and are addressed when observed; and
- Excellent safety, health and environmental performance are recognized as good business practices.

To achieve our goal we are committed to:

- Meeting compliance obligations;
- Operate in accordance with industry and customer codes of practice and voluntary requirements to which we subscribe, including group policies, agreements with regulators and communities, REACH, CDI (the Cobalt Development Institute); SANS 1929:2011; and NOSA CMB253N.
- Educate and train, motivate and support our staff and suppliers in the application of this policy and associated procedures;
- Reduce consumption and wastage of materials through recovery, rework and recycling where possible;
- Continually improve our safety, health and environmental system and performance through monitoring, preventive action, education and training;
- Develop new business opportunities that provide a sustainable future;
- Create a framework for setting and reviewing objectives and targets as stated in this policy.

We therefore commit to being a socially responsible employer in the interests of the community, future generations, and all our other interested parties.

Signature: **Managing Director** **Date:** 17-April-2017

Rev 7

Managing Director: Dr Michael Oehlers

CONTROLLED

Certifications

Quality Policy

SHU POWDERS T: +27 31 782 1061 F: +27 31 782 1160 W: www.shupowders.com

Shu Powders Africa PTY. LTD
Logra Industrial Park, No.40 Track 94040, Harrison Flats
Old Main Road, Cato Ridge, KwaZulu Natal 3680 South Africa
Postnet Suite 10015, Private Bag X7005, Hillcrest, 3650

Vat No: 4150236521 CK No: 2007/000865/07

QUALITY POLICY

Shu Powders Africa is committed to establishing and maintaining ourselves as a quality manufacturer of cobalt. To achieve this goal, we will (1) totally satisfy our customers and other interested parties' requirements and expectations in the quality of product and service, and (2) seek to understand and address the relevant external and internal issues.

We are committed to establish, maintain and continually improve on a Quality Management System (QMS) that conforms to the ISO 9001:2015 requirements.

As Managing Director, I undertake to ensure that our Quality Management System is thus directed towards achieving the following objectives:

- Only accepting orders and contracts within our managing capacity
- Planning all business activities and improving on the planned time allocations
- Employing and developing people who have the necessary skills and experience to improve our product and service
- Supporting and developing external providers of products and services who are committed to Quality Improvement
- Reacting to problems quickly and systematically and fostering a team approach to problem solving
- Aiming to deliver on time; recognising that deadlines are a crucial part of our business
- Ensuring that we address compliance obligations that pertain to our product.

The SHEQ Officer has been appointed as the Management Representative regarding all aspects of the ISO 9001:2015 Quality Management System.

Signature: _____ **Date:** 17-April-2017

Managing Director

Rev. 8

Managing Director: Dr Michael Oehlers

CONTROLLED

Glossary

- **Biological monitoring:**

Is the measurement and assessment of workplace agents or their metabolites either in tissues, secreta, excreta, expired air or any combination of these to evaluate exposure and health risk compared to an appropriate reference. All the medicals consist of the following examinations:

- Audiometric Testing
- Eye Test
- Chest X-ray
- Lung Function
- Physical exam
- Cobalt vs Creatinine (urine testing)
- Cobalt in Blood

- **ASTM D1739-94:**

The standard test method for collection and measurement of dustfall (settleable particulate matter).

- **Lost time incident:**

Lost time injury is when an employee gets injured in the course of his employment and is unable for perform the regular duties for a complete shift. This is not just limited to one regular shift only, but it can extend up to all the shifts in which the employee is unable to perform the regular duties. So from the time of the initial injury until the time the employee is able to return to regular work duties. None of the LTI's caused interruption of production or business.

- **Risk Assessment:**

The evaluation of the risks of existing substances or conditions to man, including workers, and to the environment, in order to ensure better management of those risks.

Reference List

- [Ref 1] Concise International Chemical Assessment Document 69. Communication with Dr. Do Vale of CATOMED Clinique, in Cato Ridge, KZN, South Africa.
- [Ref 2] APEX study 2010, 2012, 2014, 2016
- [Ref 3] Dust detection device: SKC- Airchek sampler
- [Ref 4] Amnesty International Report, January 19,2016 www.amnesty.org/en/documents/afr62/3183/2016/en/
- [Ref 5] London Metal Bulletin Articles, March 29, 2016.