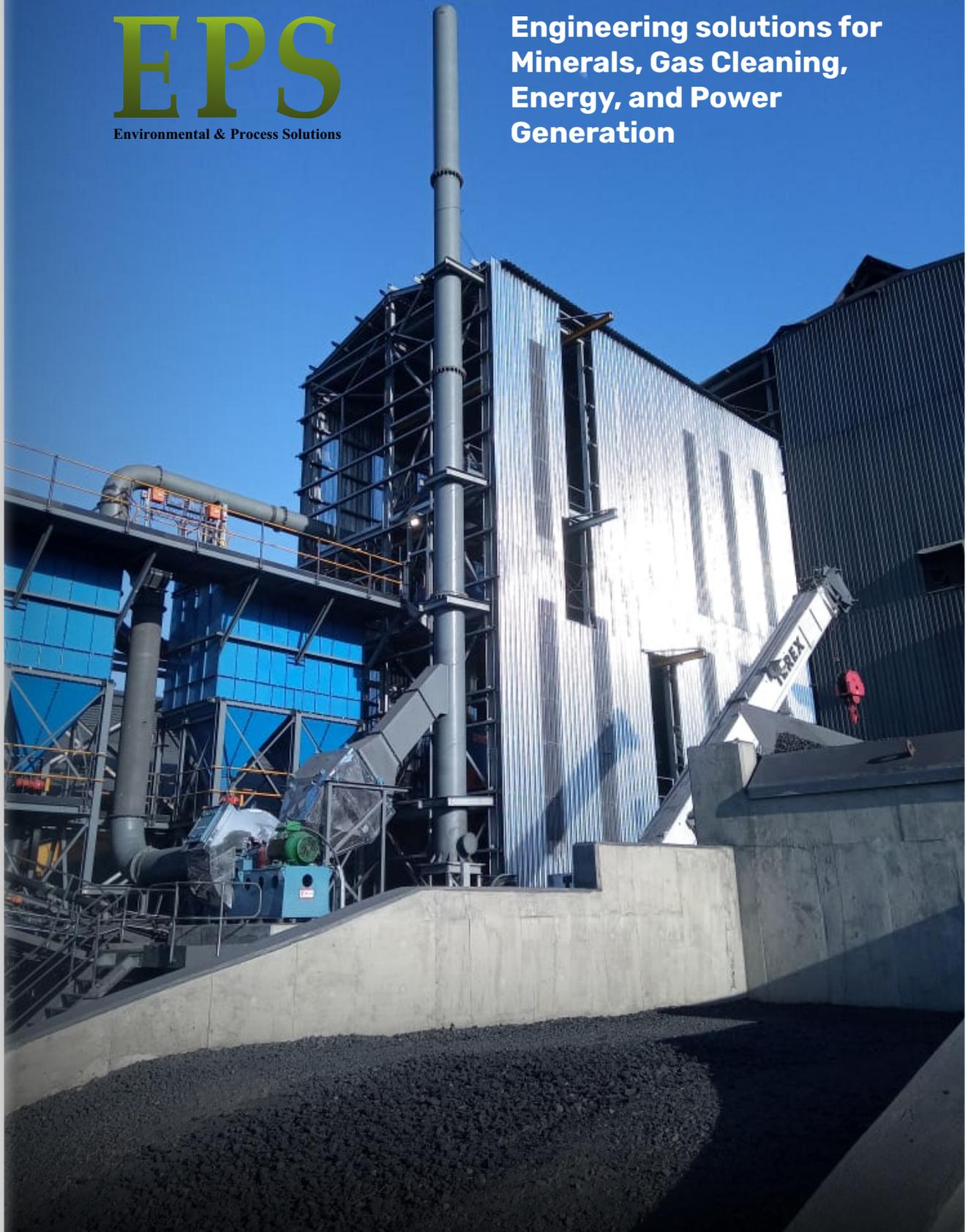


EPS

Environmental & Process Solutions

Engineering solutions for
Minerals, Gas Cleaning,
Energy, and Power
Generation



EPS-Environmental & Process Solutions

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Briefly introduce us to EPS.

EPS-Environmental & Process Solutions (EPS): The company was first registered as EPS cc in August 2005 before converting in 2008 to a company (Pty) Ltd.

The company's each have more than 30 years of experience in the pyrometallurgical, environmental, petrochemical, and energy industries with a similar combined experience of 30 years for our senior engineers.

EPS consists of a team of chemical and mechanical engineers alongside draughtsmen and support staff based in Pretoria, South Africa. We have long-standing associations with electrical, instrumentation, civil and structural, engineers for complete design solutions.

Having an agile professional engineering team allows us to provide personalised services that cater to each client's unique needs and preferences. Unlike larger organisations, where processes might be standardised and more

complex, we can adapt swiftly and customise our offerings. Our close-knit team fosters direct communication, ensuring we truly understand our clients' requirements. We pride ourselves on building strong relationships and delivering quality tailored solutions.

EPS brings value to our customers in a wide range of business sectors, including minerals and metals, environmental, power generation, waste-to-energy, and gas treatment. Our engineering solutions encompass

a comprehensive range of services fitted to meet our clients' specific needs.

EPS' core competencies include:

- Specialist consultancy, e.g., CFD modelling, gas flow modelling, root cause analysis, and fault finding.
- Compliance assessments, e.g., hazardous area classification, HAZOP studies, major hazardous installation assessments (MHI) coordination, and pressure equipment regulations.
- Due diligence review.
- Desktop, concept, and bankable feasibility studies.
- Project development support to financial close.
- Project financing.



Some of EPS' previous projects that



ACP heat-to-power project, which has received numerous awards for its innovative heat-to-power approach, is still in operation today producing up to five megawatts (MW) of electricity from thermal heat. The project has generated approximately 50,000 MWh since its inception.

The project was a Hall of Fame Winner at the SA Innovation Awards 2015, African Energy Innovation Winner at the African Energy Awards 2016 and SANEDI RECORD/RERE COMMERCIAL APPLICATION AWARD 2016.

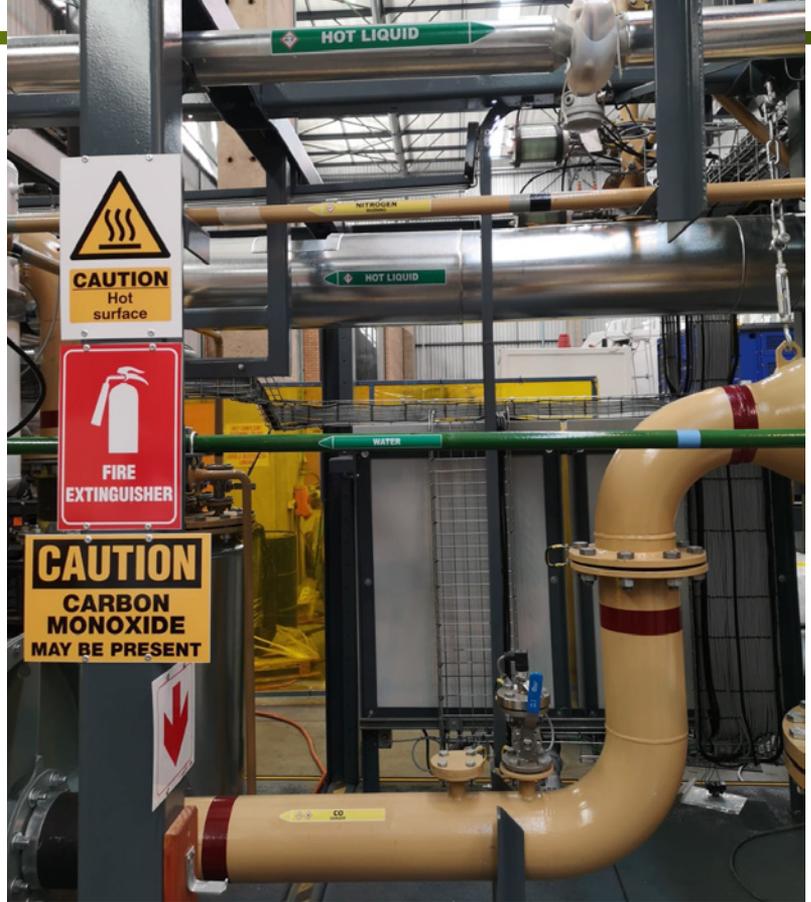


Building and gas reticulation: 3D model and in-

- Project execution as owner's project manager and owner's engineer.
- EPCM and lump sum turnkey projects.

Here's how we add value:

- Unique solutions: Every project is unique, and we thrive on innovation. Whether it's solving complex challenges or designing custom solutions, we pride ourselves on creativity and practicality.
- Feasibility studies: We conduct feasibility studies from conceptual up to bankable studies, considering technical, economic, and environmental aspects. Our goal is to determine project viability, identify risks, and propose optimal solutions with bankable signoff.
- Detail engineering designs: Our team can provide basic engineering designs up to complete detailed engineering packages in line with industry standards. Our engineering deliverables include process flow diagrams, piping and instrumentation diagrams, specifications, and detailed engineering drawings up to a complete issue-for-construction (IFC) package.



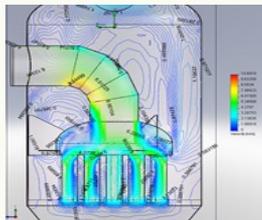
EPS's expertise includes but are not limited to:

- Pyrometallurgical industries: EPS' roots started in the pyrometallurgy industry and include ferrochrome, ferromanganese, steel, and platinum. Our experience ranges from materials handling, sinter plants, and smelters to gas cleaning.
- Speciality gas: With our gas cleaning background, we have completed a diverse range of gas studies and projects, from gas cleaning applications for environmental regulatory requirements to applications

What we take immense pride in include:



SA Calcium Carbide power project, where EPS completed the process and detailed engineering for the 6 MW off-gas handling system and cogeneration plant for SACC. EPS further provided procurement and installation support alongside commissioning services. The SACC project was awarded the Most Innovative African Co-Generation Project (Africa Energy Awards).



Flashback arrester CFD simulation and 3D model

The IFM Gas to Power Project was designed and constructed to produce up to 17 MW of electricity.

Zamanco Expansion Project

EPS completed a bankable feasibility study for a Mn smelter in Zambia.





for combustible gases such as carbon monoxide and hydrogen.

- Power generation: We have a strong focus on power generation and have completed various studies and projects relating to Thermal Harvesting™ heat-to-power, gas-to-power, and waste-to-power projects.

Our clients include junior companies up to large companies such as Maatla Resources, Anglo Platinum, SamancorCr, and BHP Billiton (South32).

What, for you, differentiates EPS from the competition?

EPS: We have a track record for creating innovative solutions for the unique challenges that clients face, as demonstrated through our award-winning engineering and projects. We have existing relationships with most stakeholders and extensive knowledge of the core processing operations alongside gas handling circuits.

EPS is technology agnostic and selects the technologies and equipment packages that best fit the application and our clients' requirements. This unique perspective and experience ensures our clients receive value for money on difficult solutions.

Our commitment to direct interaction and personalised service creates a unique experience for our clients, fostering trust and long-lasting relationships.

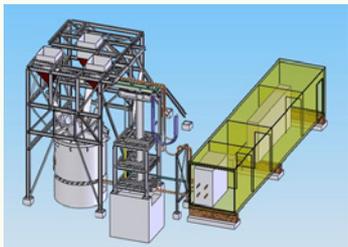
Can you tell us about EPS' mission and vision?

EPS: We strive to provide an optimum process solution to our clients through innovative engineering and technology applications. The EPS team are pioneers in establishing solutions to reduce carbon footprint, add value to waste streams, and power and energy consumption.

Could you elaborate on your partnership with Maatla Resources? How do the two companies mutually benefit each other, and what complementary strengths do you bring?

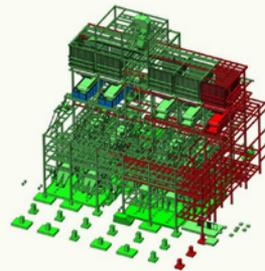
EPS: We have maintained a longstanding partnership with Maatla Resources, offering engineering studies and continuous support. Our collaborative efforts aim to contribute to Maatla's success in various endeavours.

EPS and Maatla Resources are collaborating on an exciting upcoming project: a heat-to-power initiative. This innovative project aims to utilise the heat generated from Maatla's charring plant for power generation. By harnessing this thermal energy, it can contribute to sustainable, efficient, and cost-effective electricity production.



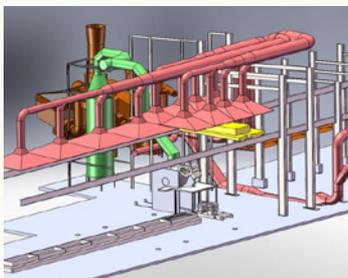
2 MVA DC Arc Furnace – Brazil

EPS designed, supplied, and commissioned a 2 MVA DC Arc Furnace (FeTi, FeMo, FeCr), including electrode arm and mast, copper anode, power supply and rectifier, bag filter, and related services equipment.



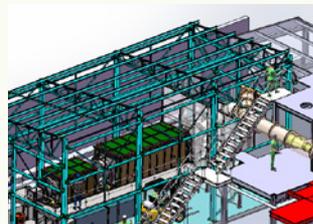
Khumani Expansion Project

EPS completed a conceptual study and EPCM costing for a 20 million tpa iron ore crushing and screening plant.



BHP Billiton (South32) Metalloys

EPS completed various concept studies related to Thermal Harvesting™ at the Meyerton West and South Plants, as well as the reduction of emissions and greenhouse gasses for the whole complex.



Thermal Beneficiation Plant 3D model and pyrolyser/oxidiser assembly

Thermal Beneficiation Plant precious metals refinery

EPS assisted a precious metal refinery (PMR) in implementing a thermal beneficiation plant to thermally treat organic byproducts and recycle PGMs back into the process, complementing a previous project that eliminated soot emissions and reduced dioxin/furan formation.



Power



What projects or projects in the pipeline that you would like to highlight?

EPS: We are actively engaged in diverse projects, spanning power generation – waste to energy, gas cleaning, hydrogen production, and iron ore processing. However, our anticipation is highest for the upcoming collaboration with Maatla, where we will harness waste energy to generate electricity.

Looking ahead, what are EPS' key priorities?

EPS: Stay with our core
EPS plans to stay committed to its core, which includes flexibility, specialised engineering, and ethical and technical competence.

Life cycle optimisation

Improving life cycle and environmental footprints for our clients on their carbon emissions, legacy wastes, and energy areas of their business. This will happen through waste minimisation and dump and airspace impact reduction for mining and industrial waste, domestic waste, or coal fines by converting these to high-value commodities with economical, power generation, activated carbon, or high energy fuel value.

Focus on waste-to-energy

With EPS' references in this sector, it would be difficult not to focus on this for the next five to 10 years, including thermal waste heat, waste gas, MSW, biomass to landfill and liquid wastes to electrical power, liquid fuels, hydrogen, and carbon sequestration in the future.

Specialised energy sources

Within this market, EPS has

done design engineering and construction of plant processing and producing, syngas, carbon monoxide, hydrogen, and electrical power in the mining and minerals space. This includes energy-intensive commodities, with our next goal consisting of ammonia, LNG/CNG, and green fuels.

Partnerships

As a small company, EPS understands the value of partnerships. Examples include Maatla as a power plant development partner, Vuselela Energy as an operational partner, and Environmental and Carbon Trading Solutions (ECTS) as a gas partner. These partnerships provide EPS with the ability to develop, design, execute, and operate small facilities in the industrial, mining, and minerals space.

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plant gas conditioning unit

Ferrochrome Smelter Cogeneration Plant

EPS completed the EPCM for the demonstration plant gas conditioning unit as input to a cogeneration plant.



Specialised equipment design and heavy-duty table feeder

Specialist in-house design for unique equipment pieces such as table feeder for wet chromite suitable for heavy fines up to 90tph. Various units are supplied to ferrochrome producers.

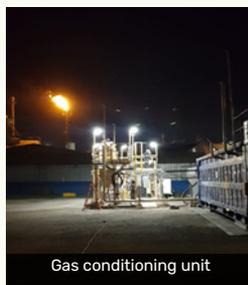
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Specialty gas conditioning and cleaning

EPS successfully completed the design, installation, and commissioning of a wet scrubber at Lanxess capable of removing Cr6 and recovering the chrome as a saleable byproduct.



Gas conditioning unit

DC Smelter Cogeneration Plant

EPS completed the process and detailed engineering for the pilot plant gas conditioning as input to a cogeneration plant. EPS further provided procurement and installation support as well as commissioning services.



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Outlook**

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