



APS AFRICA

AIR PROCESS SOLUTIONS

COMPANY PROFILE

| 2025/26 |





Registration No.: 2020/521407/07
VAT No.: 4230307441

Directors:

Patricia Maluleke | Anneke Lamprecht

BB-BEE Level: Level 2 - 51% Black Woman Owned
125% B-BBEE Procurement Recognition Level



HISTORY

AIR PROCESS SOLUTIONS AFRICA as a Company came into existence in 2024, where the previous Suppliers of the Equipment and Services now offered by AIR PROCESS SOLUTIONS AFRICA seized operation and the intellectual property, know-how, experience and knowledge was transferred to AIR PROCESS SOLUTIONS AFRICA.

AIR PROCESS SOLUTIONS AFRICA is backed by decades of know-how, experience, proven equipment design and installation history dating back to the 1980's as well as key Technology Partners to ensure the most optimal and cost effective Process Solutions and most up to date Technology is offered to our Clients at all times.

ABOUT US

AIR PROCESS SOLUTIONS AFRICA offers a wide range of Air Environmental Control Equipment and Pneumatic Material Handling and Material Storage Equipment and integrated Systems.

THE RANGE OF EQUIPMENT AND SYSTEMS INCLUDES:

- Wet Dust Collection - Dynamic Wet Scrubbers, Multi Vane Wet Scrubbers and Venturi Scrubbers
- Dry Dust Collection - Bag Filters and Electrostatic Precipitators
- Dust Suppression - DryFog Dust Suppression and High Pressure Water Dust Suppression
- De-NOx and De-SOx Systems
- HVAC Systems - Ventilation and Airconditioning Systems
- Pneumatic Conveying Systems - Dense Phase, Lean Phase and Vacuum Conveying
- Pneumatic Drying and Transfer Systems - Pneumodrier Technology
- Bulk Material Storage and Unloading - Single Compartment Silos and Multi-Compartment Silos in Steel or Concrete Construction with Single or Multiple Unloading Points.
- Mineral Classification Systems - Fly Ash Classification, Cement Classification and Blending Systems



SERVICES OFFERED

Our services offered range from On-Site System Audits, System Design, through to Manufacture

The AIR PROCESS SOLUTION AFRICA's service offering includes:

- Engineering Feasibility Studies
- On-Site Audit of Existing Equipment Installations
- Design and Engineering of New Air Environmental Control Systems
- Equipment and System Supply Solutions
- Turnkey Project Solutions including Installation and Commissioning
- After-Market Support and Service Solutions





AIR ENVIRONMENTAL CONTROL EQUIPMENT RANGE

APS AFRICA DYNAMIC WET SCRUBBER SYSTEMS

APS Africa offers three in-house Scrubber System designs, with the most widely used being the Dynamic Scrubber. The Dynamic Scrubber offers >99.5% dust collection efficiency in the 1 - 2 micron particle size range with a pressure loss of 1.5 kPa. It is ideally suited to general dust collection on medium to high dust loads.

ADVANTAGES

PROVEN DESIGN

VERY LOW COST FOR HIGH EFFICIENCY

HIGH ENERGY EFFICIENCY

INTEGRAL SELF-CLEANING FAN

LOW MAINTENANCE

LOW WATER CONSUMPTION

APS AFRICA REVERSE PULSE BAG FILTER SYSTEMS

APS Africa Reverse pulse Bag Filter Systems can handle flow rates from 0.5 to 100m³/sec and enable economical collection of dust at high filtration rates with collection efficiencies of >99.99%.

Reverse pulse Bag Filters have high collection efficiencies, maintained under variable operating conditions by the reverse pulse action and can operate 24 hr/day under arduous conditions.

The Reverse Pulse Bag Filter is fully automated and self-cleaning with no internal moving parts.

The system ensures all dust stays in the system, thus optimising recovery and ensuring that the operation is non-polluting to the environment.

APS AFRICA / SIMATEK 4T REVERSE PULSE BAG FILTER SYSTEMS

APS Africa / SIMATEK 4T Low Pressure Reverse Pulse Bag Filter enables economic collection of fumes and dust at high filtration rates, utilising absorption techniques to remove acid gasses, heavy metals and dioxins from Flue Gasses.

The 4T Filter is an economic solution for dust collection in industrial plant with the investment often paid back in product recovery.

The design of the filter housing and inlet zones ensures a smooth flow of coarse particles as well as fine dust particles into the filter.

The 4T Filter concept of combining the ideal filter unit with any of the five inlet designs, renders the solution suitable to almost any particle separation application.

ADVANTAGES

EFFICIENT PULSE JET CLEANING.

UP TO 50% OF VACUUM RESISTANCE.

SIDE OR TOP REMOVAL OF FILTER BAGS.



APS AFRICA / SIMATEK 3C REVERSE JET BAG FILTER SYSTEMS

APS Africa / SIMATEK 3C Low Pressure Reverse Jet bag Filter Units features flow rates from 5 to 100 m³ / sec.

The dirty gas is introduced tangentially into the top of the filter through a 180° scroll inlet.

This ensures even gas distribution into the filter with some coarse particles being collected by this simple cyclonic effect.

The cylindrical walls ensure that there are no “dead corners” and the risk of low temperature pockets with increase corrosion risk is substantially reduced.

The use of low pressure (0.7 - 0.9 Bar) but high volume cleaning pulse makes it possible to achieve up to 5 times higher cleaning energy than by other pulse jet filters.



APS AFRICA / ELEX ELECTROSTATIC PRECIPITATOR SYSTEMS

APS Africa / ELEX Electrostatic Precipitator Systems is the most economical system available to remove particulate from industrial gases.

Operating costs are reduced due to low energy consumption and the cost of maintenance and spare parts is low.

In addition the life expectancy of Electrostatic Precipitators usually exceeds that of upstream production units such as kilns, mills, driers and coolers.

APS Africa / ELEX Electrostatic Precipitators are capable of reducing particulate content in industrial gasses of more than 1000 g / m³ to any required residual particulate content.

APS AFRICA / DSI DRY FOG AGGLOMERATIVE DUST SUPPRESSION SYSTEMS

APS Africa / DSI dust suppression systems use ultrasonic, air atomizing nozzles, compressed air and plain water to produce a dry fog (1-10micron droplet) that agglomerates to airborne dust particles (particulate matter 10 microns or smaller [PM10 and PM2.5]).

The fog and dust agglomeration increase the weight of the airborne particles at the source, causing the particles to fall back into the process.

APS Africa / DSI DryFog Systems offer the driest form off dust suppression available as only the dust is wet and not the product. This results in low water consumption and no significant wetting of the product (typically less than 0.05% by weight).

APS Africa / DSI DryFog Dust Suppression Systems are ideal for conveyor transfer points, crushing and screening, feeders, truck tip hoppers, material loading and unloading, and other applications where airborne dust is a nuisance or hazard to the operation or neighbouring communities.



APS AFRICA DE-NOX AND DE-SOX SYSTEMS

APS Africa offers a comprehensive De-NOx and De-SOx System incorporating Selective Catalytic Reactor (SCR) Technology utilising Anhydrous Ammonia [NH₃] Injection to remove Oxides of Nitrogen and Dry Adsorption Technology utilising Hydrated Lime [Ca(OH)₂] or Sodium Bicarbonate [NaHCO₃] injection to remove Oxides of Sulphur with the additional benefit of removing Particulate Matter (PM) from the Gas Stream. Chemical Reactions

ADVANTAGES

- PROVEN DESIGN.
- FULLY INTEGRATED SYSTEM.
- REACTION OF NOX AND SOX GASSES AT TEMPERATURES BELOW 700°C.
- >99% EFFICIENCY ON REMOVAL OF SOX AND PM.
- >95% EFFICIENCY ON REMOVAL OF NOX WITH MINIMUM NH₃ SLIP.

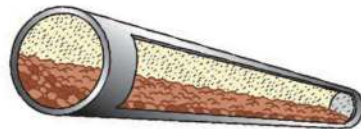
PNEUMATIC MATERIAL HANDLING EQUIPMENT RANGE

APS AFRICA PNEUMATIC MATERIAL HANDLING SYSTEMS

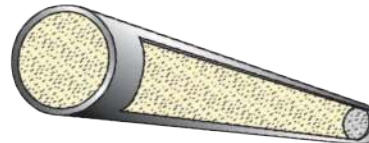
The range of Pneumatic Material Handling Systems APS Africa has to offer includes:

- LEAN PHASE PNEUMATIC CONVEYING SYSTEMS (POSITIVE AND VACUUM)
- MEDIUM PHASE PNEUMATIC CONVEYING SYSTEMS
- DENSE PHASE PNEUMATIC CONVEYING SYSTEMS
- PNEUMATIC DRYING AND TRANSPORT SYSTEMS

Moving Bed Dense-Phase:
Used for handling granular products that can be fluidised.



Lean and Medium-Phase:
Ideal for most granular products, Vacuum Conveying of Wet or dry Products.



Dense-Phase:
Excellent regime for conveying of fragile or abrasive granular products.



APS AFRICA LEAN PHASE VACUUM CONVEYING SYSTEMS

Suction technology that is designed to suite harsh mining and industrial conditions. Simplicity in design, control and maintainability.

APS Africa has the rights to all intellectual property of Vac Air Technology and is the Sole Provider for the design, manufacture, servicing, installation and supply of all spare parts for all new and existing pneumatic conveying equipment both in positive and vacuum applications.

Vacuum Conveying Systems are high performance machines offering maximum productivity, minimal maintenance and simple operating techniques.

THEY OFFER:

USED SUCCESSFULLY TO RECOVER FINES, DIAMONDS AND OTHER VALUABLE MATERIALS IN THE MINING INDUSTRY.

IDEAL FOR INDUSTRIAL CLEANING.

IDEAL FOR DUST-FREE CONVEYING OF BULK MATERIALS UP TO 600°C.

VACUUM SYSTEMS TYPICALLY USING A MAXIMUM NEGATIVE PRESSURE OF -90KPA.



APS AFRICA LEAN PHASE POSITIVE CONVEYING SYSTEMS

Lean Phase Positive Conveying Systems discharge material from one or multiple points and are economical and efficient for conveying relatively low tonnages over short distances.

They are suitable for use in the conveying of food, plastics, chemicals, powders, wood chips, sawdust, tobacco, scrap metal, ores and more.

Pressure Conveying Systems are used preferred over Vacuum Systems for Multi-Discharge Point transfer system applications.

THEY OFFER:

OPTIMAL HYGIENIC CONDITIONS, VITAL FOR FOOD PRODUCTS.

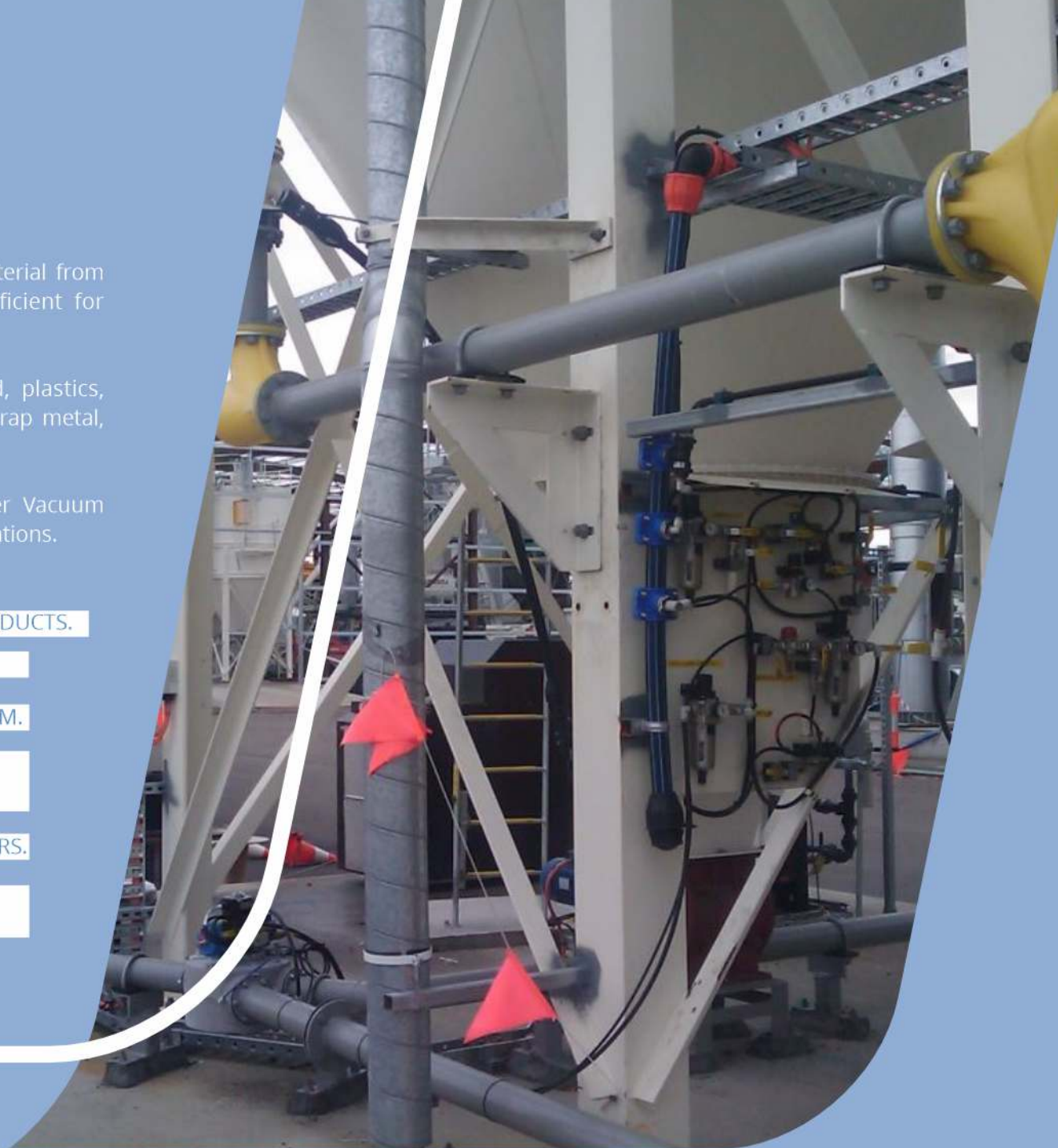
THROUGHPUTS FROM 1KG/HR UP TO 50 TON/HR.

HANDLING OF PARTICLE SIZES FROM <1MM UP TO 40MM.

CONVEYING ROUTES THAT MAY BE HORIZONTAL, VERTICAL OR TORTUROUS, UP TO 200M.

CONVEYING AIR ARE PROVIDED BY ROOTS TYPE BLOWERS.

PRESSURE SYSTEMS TYPICALLY USING AN MAXIMUM PRESSURE OF 60 KPA.



APS AFRICA MEDIUM PHASE POSITIVE CONVEYING SYSTEMS

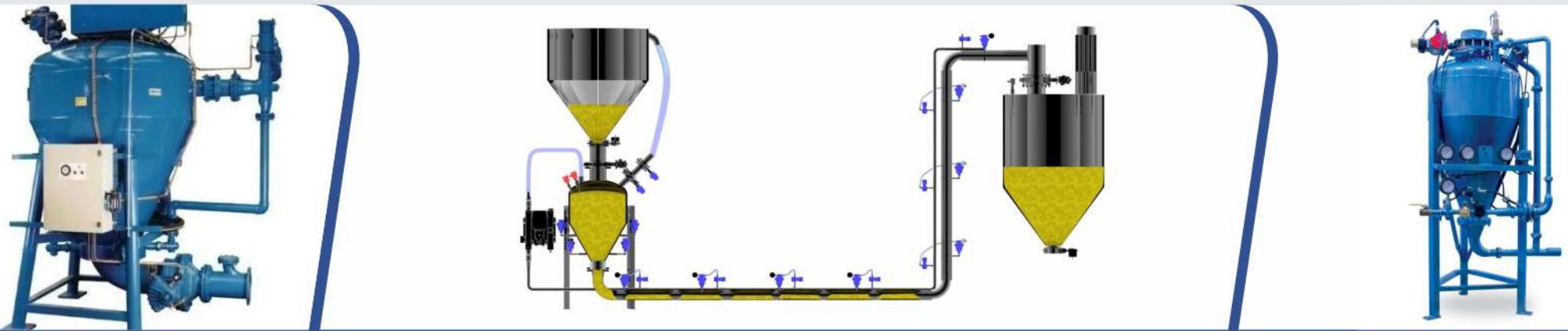
Medium Phase Conveying Systems provide the optimal solution for medium-rate transfer of aeratable, abrasive or friable materials. They are suitable for use in the conveying of chemicals, powders, minerals, ores and more.

THEY OFFER:

TRANSFER CAPACITIES OF UP TO 80 TON/HR THROUGH VARIOUS MODES OF LOADING AND UNLOADING.

CONVEYING ROUTES THAT MAY BE HORIZONTAL, VERTICAL OR TORTUROUS, UP TO 200M.

CONVEYING AIR ARE PROVIDED BY ROOTS TYPE BLOWERS.



APS AFRICA / MACTENN DENSE PHASE CONVEYING SYSTEMS

Dense Phase Conveying Systems utilise low velocity and high pressure conditions for high tonnage conveying of aeratable or nonaeratable abrasive or friable powdered, granular and lumpy materials.

THEY OFFER:

MINIMAL POWER REQUIREMENTS.

MINIMAL CONVEYING LINE WEAR.

MINIMAL PRODUCT DEGRADATION.

MATERIAL TEMPERATURES UP TO 600°C.

CONVEYING DISTANCE UP TO 2KM.

CAPACITIES OF >400 TON/HR.

MULTIPLE PICK-UP POINTS ON A SINGLE CONVEYING LINE.

PRESSURES TYPICALLY IN THE RANGE OF 100KPA TO 600KPA.

APS AFRICA PNEUMATIC DRYING AND TRANSFER SYSTEMS

APS Africa's Pneumatic Drying and Transfer System known as a "Pneumodrier" System dries a wet particulate solid while simultaneously conveying it along a pneumatic conveying system driven by heated air.

Used mainly in the Dpiamond Industry to handle Kimberlite Ore, Diamond Bearing Alluvial Gravel

and Marine Silica, the Pneumodrier System has successfully been implemented to dry and transfer Platinum Matte and Platinum Slag.

The Pneumodrier System can also be applied to dry and convey other materials such as Coal, Foundry Sands, Salt and Crushed Rubber.

THE SYSTEMS OFFER:

CONTROLLED DRYING OF MATERIALS OF MOISTURE LEVELS UP TO 25% BY MASS, DEPENDING ON THE NATURE OF THE MATERIAL HANDLED.

MAINTAINS SYSTEM EFFICIENCY THROUGH CONTINUAL ON-LINE TEMPERATURE MONITORING TO ENSURE EFFECTIVE AND EFFICIENT DRYING AND ACCURATE PRODUCT FEED.

SAVES COST, BEING SIMPLE AND ROBUST IN DESIGN WITH FEW COMPONENTS, REPLACING DUAL DRYING AND TRANSPORT SYSTEMS.

ENHANCES SECURITY BY SECURELY ENCLOSING MATERIAL FROM ENTRY TO DELIVERY WITH FEW HANDLING STAGES.

COMPACT AND FLEXIBLE, REQUIRING FAR LESS HEADROOM THAN EXISTING SYSTEMS WHETHER NEW OR REPLACEMENT.

ALLOWS FOR EASY RETROFITTING INTO EXISTING PLANT OPERATIONS DUE TO FLEXIBILITY OF PIPE ROUTING.

ENVIRONMENTALLY FRIENDLY, COMPLETELY ENCLOSING PRODUCT TO PREVENT CONTAMINATION OF PRODUCT AND SURROUNDS.

PROVIDES OPTIMUM AVAILABILITY DUE TO LOW MAINTENANCE REQUIREMENTS.

TRANSFER RATES UP TO 35 TON/HR.

DRIES AT TEMPERATURES UP TO 450°C, DEPENDING ON MATERIAL THERMAL PROPERTIES.



PRODUCT STORAGE AND UNLOADING EQUIPMENT RANGE

APS AFRICA / IBAU PRODUCT STORAGE AND UNLOADING SYSTEMS

Whatever the requirements, APS Africa / IBAU bulk storage silos and equipment ensure quick and dust free service at high loading rate.

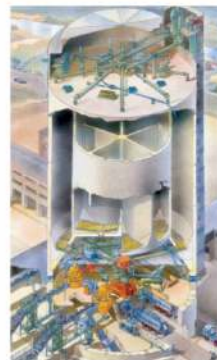
APS Africa / IBAU offers Multi- Compartment or Single Compartment Silos IN Concrete or Steel Construction utilising a Internal Central Cone.

The Internal Central Cones can be designed specifically for the area they need to be installed. The area may require the Silo to be compact and environmental considerations or cosmetic requirements may be involved.

THE BENEFITS OF AN INTERNAL CENTRAL CONE SILO INCLUDES

THE LOWER CENTRAL CONE AREA IS USED TO ACCOMMODATE ALL NECESSARY MACHINERY AND EQUIPMENT SUCH AS BLOWERS, FILTERS, COMPRESSORS, PUMPS, AIRSLIDES AND CONTROLS.

SILOS ARE BUILT WITH RAISED BOTTOMS TO CREATE A DRIVE THROUGH FACILITY, OBVIATING THE NEED FOR INTERMEDIATE TRANSPORT FACILITIES TO FEED THE UNLOADING EQUIPMENT ON BULK LOADING FACILITIES



MINERAL CLASSIFICATION SYSTEM EQUIPMENT RANGE

APS AFRICA MINERAL CLASSIFICATION SYSTEMS

APS Africa Mineral Classification Systems includes Fly Ash Classification and Cement Classification and Storage Systems, with Fly Ash Classification and Storage Systems being the major focus specifically in the South African and African Industries.

Fly Ash Classification Systems converts Waste Fly Ash being generated through combustion of Coal on Power Stations into a valuable commodity by:

- Classifying and extracting waste ash from coal-fired power station, and
- Producing high quality Pulverized Fuel As (PFA) to improve the profitability of the Power Utility.

The additional benefits of Ash Classification Plants includes:

- Reduced waste management on site by reducing the amount of ash waste at the Power Stations.
- Minimise airborne emissions as PFA used in cement significantly reduces CO2 emission levels and effluent discharge.
- Ash Classification Systems operate to specification under all weather conditions.
- As Classification Systems is specifically designed in size and function to meet the requirements of Fly Ash to be processed. High efficiency Classification Systems can be designed to handle raw feed rates from 3.5 Ton/hr to 300 Ton/hr.
- Utilising IBAU Singe Cell Storage Silo and Unloading Technology, Classified Ash and Waste Ash can be unloaded to road or rail tankers for transport to off-site processing facilities.



TECHNOLOGY PARTNERS

Apart from our in-house range of equipment, APS AFRICA has working Partnerships with the following International Companies to ensure that we offer the most up to date technology at all times:

- **Dust Solutions Incorporated - Dust Suppression Technology**
- **ELEX AG - Electrostatic Precipitators and De-NOx Catalytic Reactor Technology**
- **SIMATEK A/S - Long Bag Filter Technology and De-SOx Systems**
- **Mactenn Systems - Dense Phase Pneumatic Conveying System Technology**
- **IBAU - Bulk Storage Silo and Unloading Technology**



APS AFRICA

AIR PROCESS SOLUTIONS



AIR PROCESS SOLUTIONS

121 Sovereign Drive | R21 Corporate Park Centurion, 0157 | South Africa
+27 (0)10 447 8995 | sales@aps-africa-za.com
www.aps-africa-za.com

