

# ACTOM BUSBARS AND ALUMINIUM FABRICATION



Isolated phase busbars, segregated & non-segregated phase busbars, aluminium fabrication and welding, service and installation.

**HIGH VOLTAGE EQUIPMENT**

A division of ACTOM (Pty) Ltd



# ACTOM

## HISTORY

ACTOM HVE has a long standing licence agreement with Simelectro, with over 50 years experience, 420000 MW installed base and a presence in 90 countries.

In South Africa we have manufactured and installed most of the generator busbar systems for Eskom Power generation utility. ACTOM has completed modifications and upgrades and is currently servicing units for Eskom Generation.

In The Southern Africa region we have completed some modifications, upgrades and services for Zesco at Kariba Hydro electric scheme.

In the industrial spheres we have manufactured installed, refurbished and serviced units for Sasol Synthetic Fuels.

## MARKETING AND SALES

ACTOM and Simelectro have a dedicated

commercial team providing offers that meet the customer needs and has a Global presence through our network of agents.

## MANUFACTURING

ACTOM has local manufacturing capacity under the licence of Simelectro. We partner with recognised suppliers which have good business sense and comply with our business ethics, quality and safety management systems. We have expertise in welding of aluminium and some other alloys.

## SERVICE - INSTALLATION AND AFTER SALES

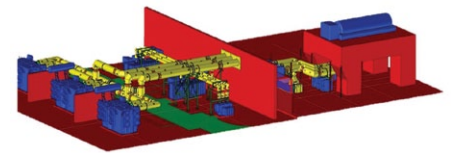
We have a team of qualified supervisors that can provide resources available to serve customers at any time.

## PRODUCT PURPOSES

Secure the power transmission between Generator to transformers with IPB, SPB/NSPB links.

Protect the system via electrical cubicals (NGR,PT,SA), Interface with machines,

- Generators
- Transformers
- Switchgear
- GCB
- Line Disconnecter
- Electrical Cubicals
- Cable cubicals



# POWER DUCT - ISOLATED PHASE BUSBARS (IPB)

## APPLICATIONS

Power plants generating 12 to 36kV from 6000 to 52000A, generated by Generator in Hydro, Thermal or Nuclear power plants. Our knowledge, experience and expertise guarantee reliability and efficiency as a key part of your installation.

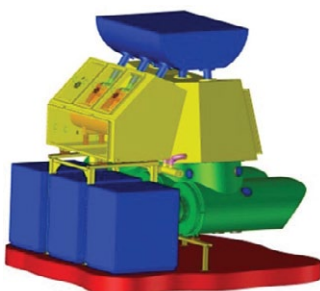
We have complete product ranges available to adapt to meet our customer technical requirements to transfer Power from generator to HV customers.

- One or three Insulator Technology
- Rated Voltage up to 36kV

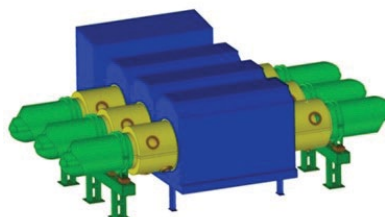
- Rated up to 52000 A
- Rated Short Circuit Current type tested up to 900KA "Peak"
- Degree of protection of enclosure up to IP65

## ADDITIONAL OPTIONS

- Air pressurisation
- Removable connections on site for easy maintenance
- Porcelain or Epoxy resin Insulators
- Additional customer requirements.



IPB Generator Connections



IPB GCB Connections



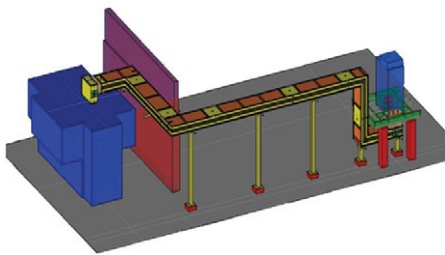
IPB Transformer Connections

# SEGREGATED AND NON-SEGREGATED PHASE BUSBARS (SPB & NSPB)

## APPLICATIONS

For power plants generating 12 to 36kV Current up to 6000A, we have a complete product range available to adapt to meet our customers' technical requirements to transfer Power from generator to HV customers.

- One or three Insulator Technology



SPB and NSPB System

- Rated Voltage up to 36kV
- Rated up to 6000 A
- Rated Short Circuit Current type tested up to 200KA "Peak"
- Degree of protection of enclosure up to IP65



SPB and NSPB System

## ADDITIONAL OPTIONS

- Copper conductors
- Anti condensation system
- Welded or Riveted Design
- Insulating materials around conductors
- Drain plugs and breathing filters.
- Blowing system.

# MAINTENANCE PHILOSOPHY

## APPLICATIONS

### A - Material Inspections

- Visual Inspections every 2 years

Inspect busbar connections, synthetic Sleeves & Gaskets, insulators, insulating rods, earthing system and air pressurization tightness if applicable.

- Minor Maintenance operations every 5 years

Following the condition after inspection change the damaged parts. Proceed with electrical tests (Dielectric, insulation, ohmic resistance)

Check all topographic link connections.

- Major Maintenance operations every 10 years

### B - Main Risks

- Mandatory replacement of synthetic Sleeves or bellows and gaskets

- Systematically repair of electrical contact surfaces of the flexible laminations or braids and adaptors) including the replacement of springs.

- According to Expertise:

- Replacement of the flexible laminations or braids
- Replacement of the elastomer spring heads and lower insulators.
- Replacements of old bolts.



Voltage Transformer



Neutral Transformer

Neutral Resistor

# SPARE PARTS AND STOCK

## SYNTHETICS

- These bellows and sleeves may be stored up to 10 years shielded from UV and humidity.
- Sleeves and Bellows at the Generator connections
- Sleeves of the ventilation ducts
- Gaskets of Aluminium sleeves and seal-off bushings
- Gaskets of insulator bases
- Stainless steel band, regressive wedges and buckles.

## ELECTRICAL CONNECTIONS

- Flexible Laminations/Braids
- Electrical Contact bolting Spring washers.

## EARTHING SYSTEM / POTENTIAL EQUIPENT

- Aluminium braids and bolt fixation

## SUPPORTING STRUCTURES

- Insulating pads and bolt fixation.

## INSULATORS

- Equipped Insulators
- Seal-off bushings

## FIXATION SETS

- Aluminium Sleeves
- Seal-off Bushings
- Access doors



Copper flexible connections



Primary Aluminium connections



Earth Aluminium connections

All Busbars and enclosures are designed and manufactured under licence to Simelectro,

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