INFORMATION ON SWITCHBOARD GROUP

Our companies, more recently known as “SWITCHBOARD GROUP” are well established and serve the electrical, building and mining industries.

The Group consists of the following companies, date of incorporation in brackets.

- SWITCHBOARD MANUFACTURERS (PTY) LTD (Established 1963) (JOHANNESBURG)
- SWITCHBOARD MANUFACTURERS NATAL (PTY) LTD (Established 1972) (DURBAN)
- SWITCHBOARD MANUFACTURERS CAPE (PTY) LTD (Established 1984) (CAPE TOWN)
- PROTECTIVE SWITCHGEAR (PTY) LTD (Established 1981)
- PROSWITCH AFRICA (PTY) LTD (Established 1999)
- EASTSIDE ELECTRICAL (PTY) LTD (Established 1988)
- FIRNOW PRODUCTS (PTY) LTD (Established 1959)
- BHODI MANUFACTURERS (PTY) LTD (Established 1999)

OUR BANKERS:
NEDBANK CORPORATE, EAST GAUTENG
P.O. BOX 282
Edenvale, 1610

AUDITORS:
Grant Thornton
52 Corlett Drive, Wanderers Office Park, Illovo, 2196

DIRECTORS:
Group Annual Turnover: Approximately R300 million
Group Employment: Approximately 500
SWITCHBOARD GROUP OF COMPANIES

Switchboard Manufacturers was founded in April 1963. Subsequently Switchboard Natal, Switchboard Cape, Firnow Products and Bhodi Manufacturers were established as well as the wholesale distribution arm viz Protective Switchgear and Eastside Electrical. These companies together with other acquisitions led to the formation of the privately owned Switchboard Group.

The Switchboard Group is a leading supplier of high quality products in the low voltage sector and commands a major share of this market. The Group operates nationally and since the advent of the sanction free period, exports to many African countries as well as Europe.

Quality Management has been practiced by the group for many years, and quality control is in line with recognised S.A.B.S. and international standards.

In addition to our Tabula range of panels we have introduced a complete new range of Modular panel boards, motor control centres as well as Form 4 designs. These products are manufactured in accordance with SANS and IEC specifications as well as the SANS 10142-1 Code of Practice.

Our panels are manufactured to SABS Standards and to this end we have obtained Test Certificates for 15, 25, 50 and 70kA. Our Tabula range, which includes fully withdrawable type MCC’s, have been successfully certified for 115kA.
GENERAL INFORMATION

• All drawings, schematics are produced on C.A.D.
• Our products are designed and manufactured in-house.
• This includes all sheetmetal work which is generally processed on a Trumpf 2020R and Weidemann Murata C.N.C. Punching Machines. Our metal preparation and powder coating plants enable us to achieve quality finishes to specified colours.
• Quality is very strictly controlled by inspection at various stages and culminating with the issue of final test and inspection reports.
• The major part of the Group’s product is manufactured to comply with specifications of both recognised standards such as I.E.C., BSS, VDE, SANS or to specification of major purchasers.
• The Group enjoys an excellent reputation for after sales service and back up for all it’s products.
• The factories in Gauteng, Kwa-Zulu Natal and Cape Town are self contained design and production entities. However, each factory specialises in certain products thus avoiding unnecessary duplication.
• Kwa-Zulu Natal – manufactures Glass Fibre Enclosures etc.
• Production capacity at the three manufacturing plants provides us with the facility of being able to cope with urgent delivery requirements.
SCOPE OF MANUFACTURE AND SUPPLY OF ELECTRICAL EQUIPMENT

- Power Boards
- Distribution Panels
- Motor Control Centres
- Control Panels
- AMF Panels
- Source Change Over Systems
- By-Pass On Load Switching Systems
- Synchronising Systems
- Containerised Sub Stations
- Containerised Motor Control Centres
- Containerised Control and Operation Rooms
- Automated Load Control Systems
- Power Factor Correction Systems
- Pump Control
- CCTV Kiosks
- Distribution and Lighting Kiosks
- VSD Panels
- Remote Stop Start Solutions
- PLC Marshalling Panels
- Metering Systems
- ABS And Plastic Enclosures
- Quadbreak Switch Fuse Units
- Kilowatt Hour Meters
- Time Switches
ABBREVIATED LIST OF PROJECTS COMPLETED IN RECENT YEARS

HOSPITALS

(All types of L.V. boards, operating theatre control panels, earth fault units, x-ray viewing screens, nurse call systems, and standby changeover systems)

- New Groote Schuur (CT)
- Sandton Clinic
- Baragwanath
- Johannesburg Hospital
- Umlazi Hospital
- Vredenburg Hospital
- Netcare N1 City
- Waterfall City Private Hospital
- Maseru Hospital
- Dora Nginza Hospital
- Midmed
- Rand Mutual Hospital
- Lenasia
- Coronation
- George Hospital
- Netcare Kuilsrivier
- Zola Hospital

MEDI-CLINICS

- Nelspruit
- Vereeniging
- Kloof (PTA)
- Highveld Witbank
- Limpopo
- Lagae
- Donald Gordon Wits
- Pretoria Heart
- Meulmed (PTA)
- Morningside (JHB)
- Sandton (JHB)
- Evander
- Ermelo
- Brits
- Tzaneen
- Emfuleni
- Rochester (JHB)
- Secunda
- Medforum
- Potchefstroom
- Sunward Park
- Sunninghill (PTA)
- Wilgers (PTA)
GOVERNMENT PROJECTS

(All types of L.V. boards, operating theatre control panels, earth fault units, x-ray viewing screens, nurse call systems, and standby changeover systems)

- O.R. Tambo International Airport
- Atlas Air Craft
- Pelindaba
- Venda Military Base
- Technicons
- Telephone Exchanges (Numerous)
- Project Eagle – Botswana
- King Shaka International Airport
- Wits Residence
- Dept. of Foreign Affairs
- Dept. of Education
- Dept. of Trade & Industry (DTI)
- Boksburg Prison
- Eskom Microwave Towers
- Bloemfontein Intermodel Transport Hub
- Ria Via Rapid Bus Transport System
- Sentech Microwave Towers
- SABC TV Centre
- Sentech Panorama Etc.
- Central Government Bldg Pretoria
- University – Soweto Campus
- Schools (Numerous)
- Military Airports
- University of Pretoria
- New SA Mint

- Gautrain Tunnel
- Gautrain Stations
  - Sandton
  - OR Tambo
  - Park
  - Pretoria
  - Centurion
  - Hatfield
  - Rhodes Field
- Stadiums
  - Ellis Park
  - Moses Mabida
  - Bloemfontein
  - Soccer City
  - Orlando
  - Mombela, Nelspruit
  - Peter Mokaba, Polokwane
POWER STATIONS

(MCC’s, L.V. kiosks for reticulation, L.V. boards, pump control panels, control desks with mimics, glass fibre enclosures)

- Matimba
- Koeberg
- Lethabo
- Arnot
- Tutuka
- Hendrina
- Rosherville Test Station
- Grootvlei
- Kriel
- Kendal
- Komatie
- Camden
- Majuba
MINES

(MCC’s, L.V. kiosks for reticulation, L.V. boards, pump control panels, control desks with mimics, glass fibre enclosures)

- Winkelhaak
- Hartbeesfontein
- Joel Mine
- Karee
- Impala Platinum
- Daggafontein
- Harmony
- Kloof Gold Mine
- E.R.P.M
- Stilfontein G.M.
- President Steyn
- Rand Leases
- Wildebeesfontein
HOTELS & CONFERENCE CENTRES

(Power boards, L.V. distribution panels, stove pedestals, boiler control boards, stage lighting, dimmer controls)

- Sun City Main Hotel
- Sandton Sun Hotel
- 15 on Orange
- Cabanas
- City Lodges
- Riviera Sun
- Cascades
- Hilton Hotel
- Swazi Spa International
- Morula Sun
- Hyatt Hotel
- Mmabatho Sun
- Fish River Sun
- Crystal Towers
- Taung Sun
- Johannesburg Sun Hotel
- City Lodge – Port Elizabeth
- City Lodge – Umhlanga
- Holiday Inn – Umhlanga
- Holiday Inn – Cape Town
- Michelangelo Hotel
- Mount Nelson Hotel
- Protea Umhlanga Ridge
- All Ster Kinekor Cinemas
- Sheraton Hotel
- Mandela Rhodes
- North Quay Hotel
- Cullinan Hotel – Cape Town
- Westin Grand
- Sandton Convention Centre
- Cape Town International Conference Centre (CTICC)
- Durban International Conference Centre
PRODUCTION PLANTS - FACTORIES

(MCC’s, L.V. kiosks for reticulation, L.V. boards, pump control panels, control desks with mimics, glass fibre enclosures)

- Glaxo Allenby
- Plascon Paint
- Protea Technology
- SA Breweries – P/Burg
- SA Breweries - Alrode
- Richards Bay Minerals
- Hulett’s Sugar
- Consol Glass
- Saldhana Bay Steel Mill
- Nestlé – Mossel Bay
- Armament Factories (Numerous)
- SASOL
- Secunda 1 & 2
- Lennon Pharmaceuticals
- Water Purification Plants
- Sewage Plants
- Nampak
- Columbus Stainless Steel
- Moza
- Toyota Production Plant
SHOPPING CENTRES

(All L.V. power boards, sub boards, control boards, pump panels etc.)

- Eastgate
- Westgate
- Newgate
- Southgate
- Highgate
- Northgate
- Sandton City (All Phases)
- Epsom Downs
- Gateway (Kwazulu-Natal)
- Cobble Walk
- Kenilworth Centre
- Willow Bridge
- Garden Route Mall
- Bayside Mall
- The Villa Mall
- Bridge Centre
- Knysna Mall
- Pick ‘n Pay (Numerous)
- Woolworth (Numerous)
- Checkers (Numerous)
- Greenacres (Port Elizabeth)
- OK Bazaars (Numerous)
- Makro Vaal
- Alberton City
- Golden Walk (Germiston)
- Menlyn Shopping Centre
- Canal Walk
- Melrose Arch
- Paarl Mall
- Zevenwaght Mall
- Cape Gate
- Mountain Mill
- Brits Mall
- Mall of the North
- Greenstone Mall
- Jubilee Mall
- Galleria Shopping Centre
COMMERCIAL PROJECTS

(All L.V. power boards, sub boards, control boards, pump panels etc)

- Bank City – Blocks A – E
- Mutual & Federal Insurance
- Fedlife Insurance
- MTN Cellular Towers
- Investec Bank
- SA Mutual Life
- Standard Bank HQ – Phase 1&2
- Sanlam Head Office – Arcadia Park
- Sanlam Head Office – JHB
- M-Net
- United Towers (UBS)
- Vodacom Towers
- Nedcor Head Office
- ABSA Tower West
- ABSA North & South
- New JSE
- Old Mutual Head Office - Sandton
- Discovery Head office - Sandton
CITY COUNCILS

(L.V. power boards, kiosk etc)

- Johannesburg
- Pretoria
- Cape Town
- Bloemfontein Civic
- Benoni
- Germiston Civic
- Germiston
- Durban
- Witbank Civic Centre
- Tembisa
- Mamelodi
- Lenasia
- Katlehong
- Soweto
- Thokoza
- KwaMashu
CASINOS, RESORTS & GOLF ESTATES

- Sun City
- Morula Sun
- Montecasino
- Gold Reef City
- Emerald Casino
- Caesars
- Witbank
- Boardwalk (PE)
- Mmabatho
- Grandwest (CT)
- Newcastle
- Welkom
- Kroonstad
- Bloemfontein
- Lesotho Sun
- Silverstar Casino (Krugersdorp)
- Steenberg Golf Estate
- Pezula Golf Estate
- Pinnacle Point Golf Estate
- Fancourt Golf Estate
- Atlantic Beach Golf Estate
- Western Cape Hotel & Spa Golf Estate – Kleinmond
- Simola Golf Estate - Knysna
INTERNATIONAL PROJECTS

- AAA Building (Angola)
- DAA Building (Angola)
- Bank of Tanzania (Tanzania)
- Algeria Stadium (Algeria)
- Eden Island (Seychelles)
- Plantation Club (Seychelles)
- Parmalat Dairy (Botswana)
- MTN (Nigeria)
- Lilongwe City Mall (Malawi)
- Panasonic Factory (UK)
- Accra Shopping Mall (Ghana)
- Polana Hotel (Mozambique)
- Labadi Beach Hotel (Ghana)
- Maseru Hospital (Lesotho)
- Sheraton Hotel (Kampala)
- Bamako Urban Park (Mali)
- Standard Chartered Bank (Ghana)
- Atlantic towers (Ghana)
Client: Switchboard Manufacturers Group, PO Box 14719, Wadeville, 1422
Manufacturer: Switchboard Manufacturers (Natal) (Pty) Ltd, PO Box 40086, Redhill, 4071
Apparatus: Low-Voltage Assembly
Designation: Floor standing assembly Type SM 25
Ratings assigned by the manufacturer:

\[ U_e: 400 \text{ V} \quad i_o : 1000 \text{ A} \quad \text{ Rated frequency: } 50 \text{ Hz} \]
\[ U_x \text{, } 690 \text{ V} \quad l_{cw} : 25 \text{ kA}^{-1} \text{s} \]

Other characteristics listed on page 3 clauses 1.5.1 and 1.5.2

The apparatus constructed in accordance with the description, drawings and photographs incorporated in the test report has been subjected to a series of proving tests in accordance with SABS IEC 60439-1999 Low-voltage switchgear and control gear assemblies.

The busbar supports were tested to IEC 60695-2-10: 2000-10 Glowing/hot-wire based test methods- Glow-wire apparatus and common test procedure subclause 8 Glow-wire test at 950 °C only

Date of test(s): May 2003

The results are shown in the record of Proving Tests and oscillograms attached hereto. The values obtained and the general performances are considered to comply with the above Standard(s) and justify the ratings assigned by the manufacturer as listed.

The test report applies only to the apparatus tested. The responsibility for conformity of any apparatus having the same designation with that tested rests with the manufacturer.

The apparatus has complied with the relevant requirements of the specification.

This report consists of:
- Report forms: Pages 1-11
- Photograph(s): Pages 12-37
- Information sheet(s): 
- Diagram(s): 
- Drawing(s): See page 2
- Oscillogram(s): TK07/04, TK08/03 and UE2901 To UE2905

AJ Greyling
Manager
High Current Laboratory: NETFA

JP Speedy
Project Engineer: NETFA

Clifantsfontein, 12 June 2003
Client: Switchboard Manufacturers Group, PO Box 14719, Wadeville, 1422
Manufacturer: Switchboard Manufacturers, (Natal) (Pty) Ltd, PO Box 40088, Redhill, 4071
Apparatus: Low-voltage Switchgear and Controlgear Assembly
Designation: Wall mounted, surface or flush DB
Ratings assigned by the manufacturer:

Ue: 240 V  I: 400 A  Rated frequency: 50 Hz
Ue: 690 V  I: 15 kA-1s

Other characteristics listed on page 2 clause 1.5.1

The apparatus constructed in accordance with the description, drawings and photographs incorporated in the test report has been subjected to a series of proving tests in accordance with SABS IEC 60947:1999 Low-voltage switchgear and controlgear assemblies.

The busbar supports were tested to IEC 60695-2-10:2000-10 Glowing/hot-wire based test methods-Glow-wire apparatus and common test procedure subclause 8 Glow-wire test at 950°C only.

Date of test(s): June/July 2003

The results are shown in the record of Proving Tests and oscillograms attached hereto. The values obtained and the general performances are considered to comply with the above Standard(s) and justify the ratings assigned by the manufacturer as listed.

The test report applies only to the apparatus tested. The responsibility for conformity of any apparatus having the same designation with that tested rests with the manufacturer.

This report consists of:
Report forms: Pages 1-8
Photograph(s): Pages 9-27
Information sheet(s): Page 28
Diagram(s): See page 2
Oscillogram(s): UG1709, UG2303, UG2303, UG2310 to UG2313

AJ Greyling
Manager
High Current Laboratory: NETFA

JP Speedy
Project Engineer: NETFA

Olfantsfontein, 31 July 2003
Client: Switchboard Manufacturers Group, PO Box 14719, Wadeville, 1422
Manufacturer: Switchboard Manufacturers (Nateli) (Pty) Ltd, PO Box 40089, Redhill, 4071
Apparatus: 2.500 A low-voltage switchboard
Designation: Multiple cubicle-type assembly
Type No.: —

Ratings assigned by the manufacturer:

- $U_{0}$: 400 V
- $I_{n}$: 2.500 A
- $I_{L}$: 5000 V
- $I_{low}$: 50 kA-1 s

Rated frequency: 50 Hz
Main circuit connections and busbars

The apparatus constructed in accordance with the description, drawings and photographs incorporated in the report has been subjected to the series of proving tests in accordance with IEC 60439:1999, to the following subclauses:

a) Verification of the short circuit withstand strength (8.2.3)
b) Verification of the continuity of protective circuit (8.2.4)

Date of tests: 14 and 15 August 2000

The results are shown in the record of Proving Tests and oscillograms attached hereto. The values obtained and the general performance are considered to comply with the above Standard(s) and to justify the ratings assigned by the manufacturer as listed on page 3.

The report applies only to the apparatus tested. The responsibility for conformity of any apparatus having the same designations as that tested rests with the manufacturer.

This report consists of:
- Report forms: Pages 1-6
- Photograph(s): Pages 7-26
- Information sheet(s)
- Diagram(s)
- Drawing(s): See page 3
- Oscillogram(s) RH1402, RH1508, RH1403, RH1406, RH1509, RH1407, RH1503 to RH1505 and RH1510

AJ Greyling
Manager
High Current Laboratory: NETFA

JP Spearty
Project Engineer: NETFA

Olifantsfontein, 1 September 2003
Client: Switchboard Manufacturers (NATAL) (Pty) Ltd, 59 Abercrombie Drive, Phoenix, Durban, South Africa

Manufacturer: Switchboard Manufacturers (NATAL) (Pty) Ltd, 59 Abercrombie Drive, Phoenix, Durban, South Africa

Apparatus: Main Busbars System

Designation: -

Serial No.: -

Ratings assigned by the manufacturer and proven by tests (main busbars system only):
- Rated short-time withstand current \(I_{lw}\) : 70 kA, 1s
- Rated peak withstand current \(I_{pw}\) : 154 kA
- Rated frequency : 50 Hz

The tests have been carried out strictly in accordance with:
- Low-voltage switchgear and controlgear assemblies

Part 1: Type-tested and partially type-tested assemblies

Date of test(s): 28 July 2009

The apparatus has complied with:

Sub-clause 8.2.3 Verification of short-circuit withstand strength (main busbars system only)

This report consists of:
- Report forms: 9
- Oscillogram(s): 1 YG2802
- Drawing(s): 2 As listed on page 9
- Photograph(s): 6 As listed on page 7

J L Monyai
Area Manager
SABS-NETFA

SS Mnihi
Specialist
Short Circuit Laboratory: SABS-NETFA
(Technical Signatory)

Olifantsfontein, 12 August 2006

Apollo Road, Olifantsfontein, PO Box 144, Olifantsfontein 1866
Tel: +27 (0)11 316 2005, Fax: +27 (0)11 316 4979

This test was performed by SABS Commercial (Pty) Ltd. This report and test results relate only to the specific sample(s) identified herein. It does not imply SABS approval of the quality and/or performance of the item(s) in question and the test results do not apply to any similar item that has not been tested. (Refer also to the complete conditions printed on the back of this page)
SWITCHBOARD GROUP HEAD OFFICE:
Tel: 011 827 5705
Fax: 011 827 1309
E-mail: cad@switchman.com

SWITCHBOARD MANUFACTURERS (PTY) LTD (JOHANNESBURG)
Established 1963
Tel: 011 827 5705
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E-mail: cad@switchman.com

SWITCHBOARD MANUFACTURERS CAPE (PTY) LTD (CAPE TOWN)
Established 1984
Tel: 021 534 3313
Fax: 021 534 3375
E-mail: info@switchman.co.za

SWITCHBOARD MANUFACTURERS NATAL (PTY) LTD (DURBAN)
Established 1972
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E-mail: info@switchboard.co.za

FIRNOW PRODUCTS (PTY) LTD
Established 1959
Tel: 011 824 1444
Fax: 011 827 8856
E-mail: cad@switchman.com

BHODI MANUFACTURERS (PTY) LTD
Established 1999
Tel: 011 827 8855
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Fax: 011 618 4286
E-mail: proswitchinf@mweb.co.za

EASTSIDE ELECTRICAL (PTY) LTD
Established 1988
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