



ADOR WELDING LIMITED



**57th Annual Report
2009-10**

INDIA'S WELDING POWER HOUSE



ADOR WELDING LIMITED

REGD. & HEAD OFFICE

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E-mail: pratikshah@adorians.com
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CORPORATE MARKETING OFFICE

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INTERNATIONAL BUSINESS DIVISION

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BOARD OF DIRECTORS, EXECUTIVE MANAGEMENT TEAM, BANKERS, SOLICITORS AND RTA

Board of Directors

Ms. A. B. Advani
Executive Chairman

Mr. Raman Kumar
Managing Director

Mrs. N. Malkani Nagpal
Director

Mr. R. A. Mirchandani
Director

Mr. A. T. Malkani
Director

Mr. D. A. Lalvani
Director

Mr. Anil Harish
Director

Mr. M. K. Maheshwari
Director

Mr. P. K. Gupta
Director

Mr. R. N. Sapru
Director

Mr. K. Digvijay Singh
Director

Mr. J. N. Hinduja*
Director
(*Upto 30th March, 2010
since superannuated)

Executive Management Team

Mr. S. M. Bhat

Mr. V. B. Tamboli

Mr. K. N. Subramanian

Mr. R. Ravi

Mr. V. M. Bhide

Mr. T. P. Mukherjee

Mr. J. Rajagopalan

Mr. H. K. Bhatia

Mr. S. S. Bhoi

Mr. A. R. Vilekar

Mr. R. R. Mohapatra

Mr. M.G. Gadre

Mr. S. Ajay Kumar

Mr. H. Venkataraman

Company Secretary

Mr. V. M. Bhide

Registered & Head Office

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6, K. Dubash Marg,
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Tel: 2284 2525, 2287 2548
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Web: www.adorwelding.com

Bankers

HDFC Bank Limited
Bank of Baroda

Auditors

Dalal & Shah,
Chartered Accountants
Mumbai

Solicitors

Nanu Hormasjee & Co.,
Mumbai

Registrar & Share Transfer Agent (RTA)

M/s. Sharex Dynamic (I) Pvt. Ltd.

Head Office:

17/B, Dena Bank Building
2nd Floor, Horniman Circle,
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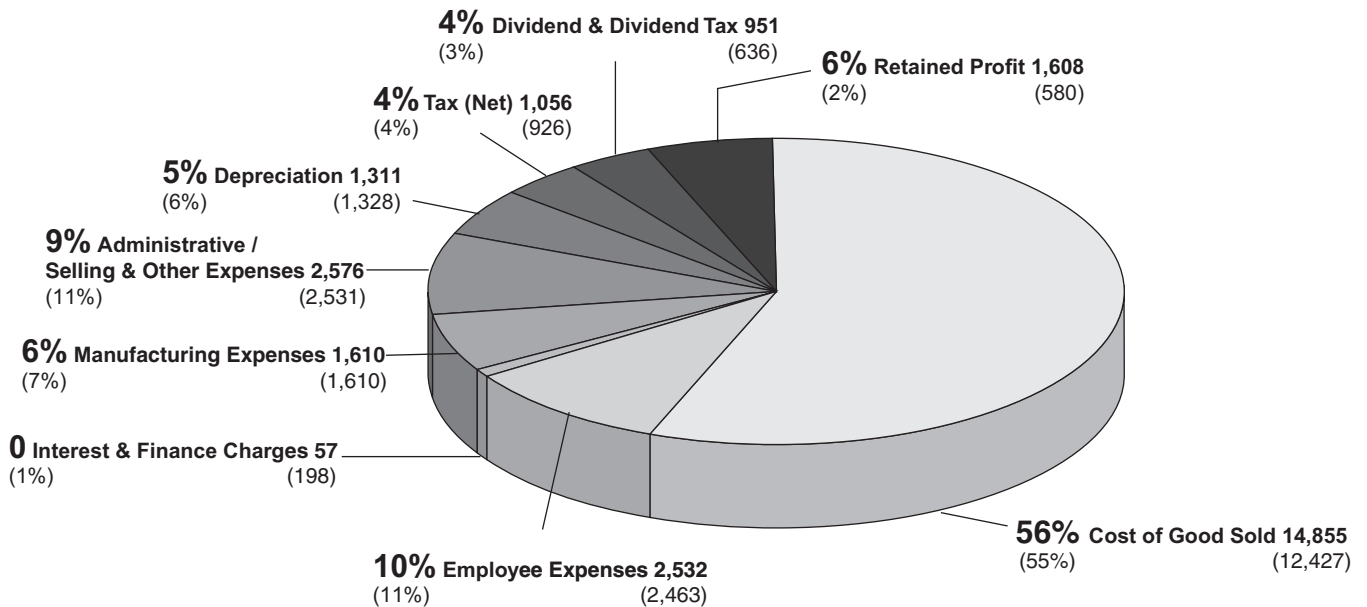
Branch Office:

Unit No. 1,
Luthra Industrial Premises,
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Web: www.sharexindia.com



DISTRIBUTION OF REVENUE

(Rs. in lacs)



(Figures in bracket indicate Previous Year)

WELDING CONSUMABLES (NEW DEVELOPMENTS)

SMAW Electrodes:

1. Tenalloy-70A L:

AWS Classification: AWS A/SFA 5.5 E7018-C1L

It is low hydrogen, iron-powder electrode, specially developed to weld 2.5 % Ni steels in refineries and power plants. It is specifically designed to give better strength along with good toughness at temperatures upto -75°C.

2. Tenalloy-70C L:

AWS Classification: AWS A/SFA 5.5 E7018-C3L

It is low hydrogen, iron-powder electrode, specially developed to weld 1 % Ni steels in refineries and power plants. It is specifically designed to give better strength along with good toughness at temperatures upto -50°C.

3. Celwel-70P:

AWS Classification: AWS A/SFA 5.5 E7010-P1

It is cellulosic electrode, specially made to weld root pass, hot pass and filler passes on cross country pipelines, which are subjected to dynamic loading and mechanical restraint. It gives smooth and stable arc with very good slag removal. It has exceptional all position working characteristic, especially in stove-pipe welding technique.

4. Cromoten-9M Spl:

AWS Classification: AWS A/SFA 5.5 E9016-B9

It is 9Cr-1Mo non-synthetic type, hydrogen controlled electrode modified with Niobium and Vanadium. It is used to weld creep resistant steels which are to be used for, boilers, power plants, refineries, etc. The weld metal is designed to meet strength requirements even after prolonged holding at elevated temperatures and also to have good impact resistance even at sub-zero temperatures. It is specially developed for Power Equipment manufacturers.

5. Tenalloy-450:

AWS Classification: AWS A/SFA 5.1 E7018-1

It is low hydrogen, iron-powder, all-position electrode for welding of Medium and high tensile steels, heavy sections and restrained joints in high tensile steels. The weld metal produced is resistant to hot and cold cracking. It is specially developed for Power Equipment manufacturers.

6. Supabase-180:

AWS Classification: AWS A/SFA 5.1 E7028

It is a heavy coated, hydrogen controlled, iron-powder electrode to weld heavy structures like cranes, bridge girders, pressure vessels, boilers, earth

moving equipments, etc. This electrode gives very high weld metal recovery, with approx. 180% deposition efficiency.

7. Nicalloy Mo3:

AWS Classification AWS A/SFA 5.11 ENiCrMo3

A special purpose Ni alloy electrode for welding Ni alloys meant for critical applications.

SAW Fluxes:

1. Automelt A57:

AWS Classification: AWS A/SFA 5.17 F7AZ-EL8, F7AZ-EM12K

It is aluminate-rutile type agglomerated flux, designed for welding of structural steels with EL8 wire. This flux can be used for a varying range of operating parameters, especially at very low travel speeds, without any difficulty. It is also tolerant to rust and scale of the base metal.

2. Automelt B20 Plus:

AWS Classification: AWS A/SFA 5.17/5.23 F7A8-EM12K, F7A6/P8-EH10K, F7P6-EH14

It is Fluoride-Basic type of agglomerated high basic flux with manganese pick-up. It can be best used with wires like EM12K & EH10K. This flux gives excellent sub-zero impact properties and can be usable with low alloyed wires. It can be used for welding structural components above 20mm thickness as well as pressure retaining butt joints.

3. Automelt B21 Plus:

AWS Classification: AWS A/SFA 5.17/5.23 F7A6/P8-EH10K, F7A4/P6-EH14

It is Fluoride-Basic type of agglomerated high basic flux, which behaves neutrally with respect to manganese. It can be best used with wires like EH10K & EH14. It can be used for welding structural components above 20mm thickness as well as pressure retaining butt joints. It can also be used for welding heat resistant, cold tough and age resistant steels.

4. Automelt B25 Plus:

AWS Classification: AWS A/SFA 5.17/5.23 F7A8/P8-EH10K

It is a special agglomerated Fluoride-Basic type flux best suited for welding heat-resistant steels. It can be best used with micro alloyed wires like EB2, EB2R, EB3, EB3R, EB9 etc. This flux gives very good sub-zero impact properties with very good weldability. It is to be used for welding of heat resistant Chrome-Molybdenum steels. It is also characterized by low S, P and X-factor with EB2R and EB3R wires.



EQUIPMENT GROUP (NEW DEVELOPMENTS)

In continuation with last year's efforts, we strategically focused the development of new generation, energy efficient Inverter based welding power sources for standard and specific applications like cross country pipeline welding etc. We developed and introduced following power sources to bridge the product gap with respect to competitive market requirements for some industry segments like Shipyards, Power etc.

1. CHAMP 163 / CHAMP 253:

These are the world class, high efficiency and high power factor, IGBT type inverter based MMA DC welders, resulting over 35% energy savings compared to the conventional thyristor type power sources. They are suitable for light and medium duty, general purpose production and maintenance welding applications.



These power sources have following salient features:

- Latest IGBT based Inverter technology
- High operating frequency
- High efficiency (>85%) and High power factor
- Smooth and stable arc with minimum spatter
- Hot start / Arc force control / soft arc control features available as standard
- TIG welding operation possible with lift arc or scratch start technique without HF unit

These machines are provided with following protections:

- Over Voltage and Under Voltage
- Over Temperature
- Single phasing

2. CHAMPMULTI 400 (SSPW) :

CHAMP MULTI 400 is IGBT inverter based, fully digital controlled, synergic welding power source, suitable for multi process MIG/MAG and MMA welding applications. It is specially designed for Manual and Semi Automatic (self shielded FCAW) welding of cross country pipe welding applications.

The complete system consists of Power source, Wire feeder, Torch and interconnecting cables. By selecting the CC or CV mode through Digital panel, SMAW or GMAW process can be selected.



The power source has following salient features:

- Digital Panel for adjusting the welding parameters and selection of Process either SMAW or GMAW.
- Fully digitally controlled Synergic operation for single point control in short circuit arc in MIG / MAG welding.
- 30% more Energy efficient than conventional machines.
- Excellent dynamic response enables superior arc characteristics.
- Unique feature of Fresh Tip Transfer (FTT) to avoid globule formation.
- Weld programmes for 10 Nos of Job can be stored for GMAW / FCAW process.
- Automatic "Weld Stop" facility.
- Suitable for TIG operation by interfacing separate HF control unit in CC mode

These machines are provided with following protections:

- Over Voltage and Under Voltage
- Over Temperature
- Protection against Single phasing

3. CHAMPTIG 163 / CHAMPTIG 303 / CHAMPTIG 303AD:

These are the Inverter based, energy efficient TIG welding outfits for 160 amps, 300 amps ratings. The first two machines are recommended for DC TIG welding applications, where as the last outfit can be used for DC as well as for AC TIG welding applications. These machines are the advanced Inverter based technology power sources optimized for the best Arc performance and are used for welding of varieties of metals, i.e. CHAMPTIG 163 and CHAMPTIG 303 for thin and medium thickness steel and stainless steel materials where as CHAMPTIG 303AD for Aluminum and Magnesium materials.



These machines have following salient features:

- The range these models provide TIG welding solutions for thin sheet to thick sheet welding applications.
- Light weight, compact power sources for easy mobility on shopfloor.
- Energy efficient power sources – saves energy up to 30% resulting reductions in energy bill and operating cost.
- CHAMPTIG 163 is single phase machine, whereas other machines are three phase machines.
- They are provided with full TIG control functions like, current up slope / down slope, Gas pre-postflow, pulse frequency, crater current controls etc.

These machines are provided with intelligent protections against over/under voltage, overload, over temperature etc.

4. RANGER 403 / RANGER 503:

These thyristor based MIG/MAG welding outfits of 400 amps and 500 amps capacity are basically developed for heavy duty, rough and tough handling and usage of equipments at some industry segments like Shipyards and Power projects etc.



These machines have the following salient features:

- Vertical construction of power source enables better ventilation of the critical components of machine.
- Edge wound coils and welded core construction improves reliability and makes them ideal for heavy duty applications like shipyards and power projects.
- Power source is provided with protections against over load and over heating.



5. THYROLUXE 500:

This thyristor based 500 amps DC MMA welder is developed for heavy duty structural welding application against specific requirement of overseas customer in middle east market. It has all the features of our present MMA welder Model – Thyroluxe 401. However, design and construction of the power source is further improved to withstand high ambient and humidity levels of working environments available in Middle East countries. It is also made easy for the maintenance of critical components

6. WELDING PAYLOADS:

Champ 4x403

Champ Multi 2x400

Champ Multi 4x400

We have developed and introduced welding payloads for Manual welding (SMAW) and Semiautomatic (FCAW) welding applications at project sites including cross country pipeline welding and power projects. These welding payloads are suitable for simultaneous use by 2, 4, 6 or 8 welders. These welding payloads along with DG sets are mounted in the trailer or the truck as suitable for the particular project site.



These welding payloads have specific advantages of reduced handling, compared to the handling of many individual power sources at project sites, and thus improve overall welding productivity. They are also very easy for transportation from one project site to another project site.

7. FILLET WELDING MIG TORCH TRACTOR:

This Fillet welding MIG tractor or more commonly called as carriage is developed and introduced to increase the welding productivity within workshops, shipyards or project sites. MIG Torch tractor is basically a motorized tractor or trolley which holds the MIG torch and does the continuous fillet welding in horizontal as well as vertical plane. It works on single phase 230 volts AC supply and has the magnet at the base, which holds the trolley for steady run in vertical plane also.



This trolley has following main features:

- It is light weight compact tractor, which is very easy to carry anywhere. It weighs only 6 kgs.
- Four wheel, chain drive enables steady traveling and strong magnet at the base provides firm grip while traveling during welding.
- Input supply protection in case of short circuit of input supply cable.
- Improves welding productivity multifold

PROJECT ENGINEERING BUSINESS (NEW DEVELOPMENTS)

1. FLARE SYSTEM AT BORL BINA

Top three meter Tip is made from Inconel & Incolloy followed by SS Molecular Seal. Flare System is Ignited at Bharat Oman Refineries Ltd. Bina with the help of Flame Front generator panel. The height is more than 100 Meters, derrick supporting structure and Water seal at Bottom.

The flare components are inspected by leading gas and oil consultant in India Engineers India Limited.

Capacity : 9,46,973 kg/hr.

Tip Size : 66 Inch



MOC of heat exchangers were:

Shell material: SA 516 Gr.70

Tube Sheet: SA 516 Gr.70

Flanges: SA 266 Gr.4

Tubes: SA 179

Nozzles: SA 106 Gr.B

3. WATER SEAL DRUM FOR IISCO

Water seal drum vessel of 4 Mtr.dia X 10 Mtr. Length was fabricated in March 2010, and transported to SAIL (IISCO) Burnpur.

Approx. 1,00,000 litre water is used for hydro test of this large vessel.

The final inspection is done by MECON.



2. HEAT EXCHANGERS FOR ESSAR VADINAR

Four heat exchangers are fabricated at PEB, ASME approved work shop. The scope for the said included Procurement, fabrication surface treatment, testing, inspection supply, spares & Third party inspection.



4. MODIFICATION OF EXISTING SYSTEMS

Large order is received from Oman for replacement of ignition system supplied by John Zink USA for Petroleum development of Oman, Yibal site.