

THE
ERLENWEIN
ORGANISATION



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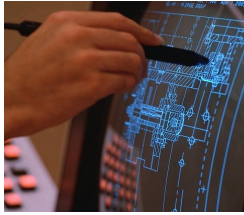
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OVERVIEW



We have a reputation for delivering world class results across a variety of specialist engineering and manufacturing projects involving electrical, electronic, mechanical and manufacturing disciplines.

Whilst our principal area of business is the automotive industry, we also bring the benefit of experience in a variety of other industries to bear on our work for the automotive sector.

Dedicated to achieving excellence in everything we do, we are frequently called upon to take on those jobs from the "too hard basket."

"Out of the ordinary" is everyday business for us - our experience with these sorts of assignments, as well as our particular attitude and approach, equips us to enjoy the challenges provided in such work.

ASSOCIATED OPERATIONS



AETL (Australian Engine Test Laboratories)

AETL is an independent advanced engine testing facility located in Melbourne Australia, providing the highest level of security and confidentiality for R&D and testing requirements of designers, manufacturers and regulatory bodies.

SERVICES AND CAPABILITIES

We work closely with our clients to clearly establish requirements and expected outcomes, before providing the consulting advice, design work, equipment and turnkey systems as appropriate.

Our expertise covers areas such as:

- Electronics
- Electrical engineering
- Fabrication
- Automation
- R & D
- Data acquisition systems
- Engine test facilities
- Equipment calibration
- Turnkey systems



FACILITIES AND RESOURCES



Facility

Our headquarters are in Airport West in Melbourne, Australia, where we have our

- administration office
- instrumentation room
- machine room
- design office
- fabrication and manufacturing workshop.

Team

Every project varies in size and requirements. We identify the requirements and then implement the appropriate management systems and assign the appropriately skilled personnel to handle all aspects of the project.

With our track record and contacts in the business, we can quickly scale up (or down) to provide the right resources for a variety of projects.

Networks



We have an extensive network that provides us with a wealth of knowledge and expertise. A more specific overview can be provided to address specific client project requirements.

THE ERLLENWEIN APPROACH

As important as **what** we know, is **how** we go about what we do.



Imagination, innovation, creativity and a "can do" attitude - as well as technical know how, are all important parts of the unique culture of our organization - which in turn enables our people to more confidently take on those out of the ordinary projects.

Rather than simply dismiss the past (for no other reason than it is "the past"), we "actively mine" the experience base of both our organization and networks, in order to identify and extract practical knowledge that can help today - and tomorrow. In that way, we are continually building a fresh new generation of experienced people that enhance their skills with the best of the past.

Management Systems

A common sense approach which keeps jargon to a minimum, is our preferred way of working - we identify the important issues and then ensure that communications between all members of the team are optimised.

Creative Partnering

We work closely with our clients and subcontractors as appropriate, to ensure that every one is truly "engaged" in the project and that all "cells of expertise" are brought to bear on the project in the most effective way.

Reporting and Documentation

We regard proper reporting and documentation as an essential part of every project, so we work with our clients to meet agreed specifications for documentation.

Needs Assessment and Systems Evaluation

Put our experience to use to help you assess how your manufacturing machinery and systems can be improved and concepts achieved.



RESEARCH & DEVELOPMENT

We have an ongoing program of R & D we undertake in our own right as well as R & D activities for clients.

Our R&D work ranges from evaluating requirements necessary to achieve desired outcomes, to taking the process from idea generation right through to implementation. The use of advanced technologies and innovative conceptual design, together with evaluation procedures that validate functionality of complex systems and incorporate mechanical, electrical and software solutions, results in practical, real world applications that achieve desired outcomes.

LONG TERM RELIABILITY



In some 30 years of doing business, we have handled many complex projects worth many millions of dollars. Our financial and other management systems and procedures have stood the test of time

A HISTORY OF PERFORMANCE & ACHIEVEMENT

Commencing in the very early 1970s, the Erlenwein Organization has established a proud track record.

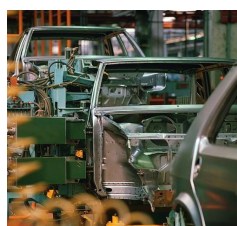
We initially specialized in the design, manufacture and commissioning of electrical control systems for machine tool equipment and production systems, predominantly in the automotive industry.

We have worked as contractors directly with organizations such as GM, Ford, Email and Repco, as well as working as subcontractors for engineering houses and consultants such as Malcolm Moore, Andrew Engineering, Civil & Civic and many others.

The types of equipment we have worked on includes:

- Automotive production transfer lines
- Special purpose assembly lines and machinery
- Safety machinery and systems
- Metal Processing
- Automation control
- Testing and evaluation
- Portable & Permanent engine test facilities
- Transient atmospheric pressure simulator machine
- Volumetric compression analyser instrument

We are particularly strong in the automotive and related areas.



A snapshot of some projects that are indicative of our work include:

De Fazio Ceramics

Complete machine manufacture and electrical systems for automatic glue and texture coat production

Holden

- Holden Hybrid Display Car automation and visual mode display design
- Production item identification and delivery system.
- Complete mechanical and electrical conveyor system design, manufacture, installation and integration with existing systems.
- Dyne Section at Holden
 - Design, manufacture, installation and commissioning of cell and facility PLC operating systems. Integration with existing retained systems and new test cell dynamometers, and facility ancillary equipment.
 - Commission control and data acquisition equipment
 - Design control and safety interlock systems
 - Aid equipment suppliers and Holden personnel with the integration and implementation of systems
 - Calibration of facility equipment
 - Trouble shooting facility system faults
 - Call out arrangement to minimize down time when urgent jobs are in progress
 - Prepare equipment for specific test requirements
 - Design, manufacture, install and commission specialized equipment and instrumentation as required
 - Design and implement fault diagnostic system for facility shutdown analysis
 - Design safety interlock system for unattended overnight running of endurance cells
 - Design and implementation of ignition systems, instrumentation booms, control desk instrument racks etc.
 - Project, personnel & contractor co-ordination.



Special Purpose Instruments & Machine Development

Volumetric Compression Analyzer Instrument

Check the combustion volume of an engine using sound waves

Transient Atmospheric Pressure Simulation Machine

Simulates the desired atmospheric pressure available to an engine during transient operation

Portable Engine Test Cell

Fully functional, portable engine endurance test facility

HISTORICAL OVERVIEW OF SOME PREVIOUS PROJECTS



General Motors, Melbourne

On Camira engine production plant and other areas:

- 26 station, in-line transfer machine for exhaust manifolds
- 16 station, in-line transfer machine for water pump housings
- 18 station, in -line transfer machine for bearing caps
- Piston deburring machine
- Oil pump housing machine
- Piston pin press
- 3 station, dial index machine
- 4 station, dial index machine
- 5 station, dial index machine
- Line conveyor for pump housings

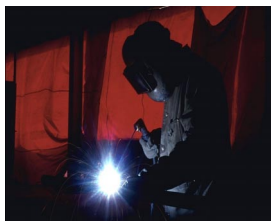
Our involvement in the above was sometimes direct, and sometimes as subcontractor to organizations such as Malcolm Moore Engineering, Repco, Clyde APAC and others.

Condor Engineering Group

- 6 station, dial index machine (to be used on NISSAN inlet manifold production)
- Disc brake drilling machine (to be used by FORD MOTOR COMPANY)

Andrew Engineering Company

- 7 station machining centre (for COMALCO)
- Automatic controls for plastic coating on aircraft wings (for GOVERNMENT AIRCRAFT FACTORY)
- Automatic controls for transformer stacker (for WILSON TRANSFORMERS)
- Centre seal bag machine (for W R GRACE)
- Embossing punch press (for OTIS ELEVATORS)
- Cut-to-length line (for METAL BLANK CO)
- Automatic press (for OGDEN INDUSTRIES)
- 2 automatic presses (for SHOPFITTING INDUSTRIES)



Malcolm Moore

- Automatic press (for BECHTEL)
- Drilling machine and automatic press (BOSCH)
- Grader blade press (for SIDDONS STEEL MILLS)
- Automatic press (for ARMSTRONG YORK)
- Piercing machine (for BOSCH)
- Engine head washing line (for FORD)
- 4 station, dial index machine (for LAMAIR)
- Plastic fuel tank manufacturing machine (for FORD)

KH Consolidated

- 3 roller milling machines
- Purlin milling machine
- Milling machine for Singapore factory

Diecraft Australia

- 2 station, stainless steel block machining centre

GFC Engineering

- Automatic door control cabinets (for DEPARTMENT OF HOUSING'S ANTARCTIC PROJECT)
- Wooden beam manufacturing machine
- Automatic door control (for KODAK)



Industrial Containers

- Electric safety guards (DLI approved) with infrared pulsing

Western Titanium

- Design, manufacture and commissioning of electrical systems on 2 bucket wheel reclaimers on the Eneabba project. Mechanical work was by Krupp

Four 'n' Twenty Pies

- Fully automated dough mixing line



- Pie packaging line (individual and bulk packaging)
- Sausage roll packaging line {individual and bulk packaging)

Hoover

- Refrigerator assembly line

We have also had involvements with many other companies, such as ROBOT TRADING, CATERPILLAR, ERICSSON, WESTINGHOUSE, CAMERON & JASON, SIEMENS, etc.



APPENDIX