

Robert Lyndon Welke

Company

Managing Director, Tallemenco Pty Ltd

- Operations Office: Palm Beach, QLD

Qualifications

- Certified Irrigation Agronomist (2011)
- Certified Irrigation Auditor, Landscape (2007)
- Associate Diploma, Mechanical Engineering (1983)
- Fitter and Turner (Indentured Trade Person) 1971

Professional Memberships

- American Society of Irrigation Consultants, Full Professional Member (2011)
- Australian Golf Course Superintendents Association (2011)
- Irrigation Australia Ltd (IAL) (2006)

Career Summary

Rob has been involved in water reticulation for almost all of his working life. From 1968, he worked for SA Water for 25 years where he gained extensive water hydraulics experience involving pump selection and testing (pumps up to 5,000 kW), flowmeter research and development and pipeline friction testing on SA's major water distribution pipelines up to 1600mm diameter. He also designed minor pumping stations and supervised an SA Water Regional Drafting Office (Berri) for 5 years involving the disciplines of Water Supply, Irrigation, Drainage and River Murray Works.

After a brief stint in Cairns in 1993 working on Asset Management Plans for Cairns City Council's water assets, Rob spent 6 years with Hydrotech Aust Pty Ltd, in SA where he conducted detail design and manufacture of OEM packaged multiple pump systems for golf, turf, horticulture and mechanical services for clients throughout Australia and SE Asia/Pacific, and including site commissioning of many of these systems. He also developed vacuum priming systems and air conditioning systems for VFD's.

Since October 2000, Rob worked for 3 years for the Adelaide Office of Hydro-Plan, Australia's largest irrigation consultants. Here, he conducted detail CAD design and site commissioning of irrigation systems, pipelines and multiple pump systems for horticulture. He project managed and audited numerous large scale irrigation systems up to \$1.3m for Commercial and Local Government interests.

Rob moved to Queensland in 2003 and established his own Company, Tallemenco Pty Ltd. Since then, and under the umbrella of this company, Rob CAD and detail designed and specified irrigation and recycled water treatment pumping stations, and prepared Recycled Water Management Plans. He has conducted bore drawdown tests and conducted site audits on numerous turf irrigation systems throughout SE QLD.

In 2005, Rob established the **P.I.P.E.S.** auditing service (ie, **P**umping and **I**rrigation **P**ipeline **E**fficiency **S**ervice) which uses multiple data loggers to analyse and optimise irrigation pumping operations.

In 2010, Rob created the "Energy Efficiency for Irrigation" Training Course, which he has used to train irrigation personnel in identifying pumping and pipeline deficiencies and how this can be used to restore both energy and irrigation efficiency.

Experiences:

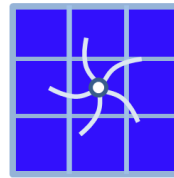
- Trained irrigation personnel in identifying pumping and pipeline efficiency issues. www.talle.biz/training.php
- Pumping Station and Pipeline field performance verification up to 300mm diameter. Conducted extensive data logging applications to pumping station and pipeline pressures, tank levels and flow metering. www.talle.biz/pipes.html
- Acted as "Expert Witness" for clients pursuing professional advice on pumping issues. www.talle.biz/pumptest.html
- Pump performance tested pumps up to 5000 kW, with economic analyses for overhaul. www.talle.biz/pumptest.html
- Since 2003, designed and specified over 30 pumping stations, design and project managed 6 recycled water pumping stations (up to 150KW) and treatment plants for Class B to Class A for irrigation systems. www.talle.biz/design.html
- Designed drip irrigation systems for horticulture, principally vineyards.
- Pump internal corrosion monitoring with various surface treatments. www.talle.biz/corrosion.html
- Water Flowmeter research and development to establish flowmeter accuracy parameters. www.talle.biz/metering.html
- Pipeline friction testing to determine nature of friction losses in major pipeline systems up to 1700mm diameter. Rehabilitation of aged pipeline systems following friction testing. www.talle.biz/friction.html
- Cost estimating for water mains extensions up to 600 diameter and minor capital works up to \$500k.
- Survey and drafting, including pipeline route and level surveys, as constructed drawings including CAD, River (Murray) navigation channel surveys.
- Project management of complete irrigation pump stations (up to \$400,000 (1995)), pipelines (up to \$900,000 (2002)), conceptual and detail design, manufacture and commissioning of irrigation pump stations (predominantly variable speed up to 500 kW), site installation and commissioning both nationally and overseas. www.talle.biz/manage.html
- Turkeys nest dam design, designed vacuum priming systems for pumping. <http://www.talle.biz/design.html>
- Preparation of Pumping Station Operations and Maintenance Manuals and training personnel in pumping station operations.
- Preparation of Recycled Water Management Plans for end clients.
- Preparation of Water Efficiency Management Plans for end clients.
- Designed new pipeline systems up to 250mm using EPANet hydraulics software. <http://www.talle.biz/design.html>
- Experience in iron removal from ground water and the associated water analyses and treatments
- Liaised with Federal, State and Local Government Departments regarding water issues.
- Refer video <http://www.youtube.com/watch?v=ubVxk3QeHRg> for exposé of Rob's experiences, also available on Tallemenco's web site at www.talle.biz home page.
- Refer to www.talle.biz/links.html for professional referees.

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