

University of Auckland FSAE Team Place 4th in Formula SAE Australia

The University of Auckland's Formula SAE Team, placed 4th overall in the Formula SAE Australasia competition held over December in Melbourne. A significant achievement and the teams best since entering competition in 2004.

Formula SAE epitomises do-it-yourself motorsport, where student teams from Universities throughout the world conceive design, fabricate, and compete in small formula-style open wheel racing cars.

With the support of the University and numerous loyal sponsors, the team sought to not only do them proud but prove New Zealand's next generation as leading innovators in engineering and motor sport design.

The team continued their past success in the competitions static events, placing first in the business presentation for the second year running and third in design, a fourth consecutive year in the top three. However the jewel in this years successes was the cars improved reliability in the dynamic events, a major goal of the 2011 team. This saw the car start every heat and finishing the endurance event, a grueling 30-lap test of a car's reliability. The first time since 2007 the team has finished this race and the first since 2006 they have completed all events. Unfortunately their only endurance run was in the damp, where they achieved the best wet track time of the day, but not close enough to compete with the dry track speeds of the top teams.



Much of this success has been attributed to the teams key target development area. Redesigning and improving the crankcase with oil in mind. The successful redesign enabled a lower centre of



UoA Car In-Action During The SAE Australia Endurance Race

gravity and to keep the pressure up during lateral forces thus improving its reliability.

NALCO provided free aluminium for the parts with NALCO customer PSP Engineering, a key team sponsor, donating countless machine hours to fabricate the crankcase and covers. This involved converting the teams 3D Solidworks files and machining the parts on their 4-axis lathe. A process they have thankfully automated saving manually programming over 150,000 lines.

"PSP believe in developing NZ's innovate kiwi no. 8 wire approach to solutions and employing a number of young engineers" key reasons MD Brent Griffiths states was behind their sponsorship of the 2011 team.



UoA FSAE 2011 Team and Car

Inside this issue: **Super Clearance Special** | **NZ Aluminium Milestone** | **Change to Profile News** | **Update**

Please contact us for more information about our products or any stories of interest.

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Winner of the Westpac Manukau Business of the Year Supreme Award 2009



NALCO Update



Hi everyone and welcome to NALCO's first Profile News for 2012.

The Christmas and New Year break saw some unusual weather through out the North Island but the break was still welcomed by most and was once again an opportunity for annual

maintenance at our Hamilton Extrusion Mill and a major upgrade was also undertaken on our ART 12m Router based in Auckland. The first significant upgrade on this machine, which has proven to be extremely reliable operating on split shifts over the last three months to meet a significant increase in demand over the last quarter. Hopefully the beginnings of a market wide trend that we hope continues.

2012 is shaping up to be another busy year at NALCO with a move to our new state of the art Warehouse in Auckland in April and a busier year forecasted by a number of our customers. We are beginning to see an increase in demand as the Christchurch rebuild starts to get underway and look forward to the expected increase in residential and commercial building.

This edition profiles the University of Auckland's Formula FSAE team who NALCO and NALCO customer PSP Engineering have supported with Aluminium plate and fabrication for their open wheel entry and an extra special clearance on a range of NALCO extrusions bar, sheet, treadplate and plate.

This year will also see a change to the NALCO Profile News as we move to publish this every second month and launch more industry specific material. Those of you still wanting to receive NALCO's Discount and Clearance Specials on alternate months should register to receive these by email on www.nalco.co.nz.

We hope that you enjoy this edition and don't forget to check out the specials on the back page.

A New Year, A New Start, Changes for Profile News

NALCO Profile News will be moving to a bimonthly publication in 2012. Look out for some new initiative coming soon to fill the space.

To receive NALCO's Specials and Clearance Discount Offers every month via email, please register at www.nalco.co.nz/Specials.aspx

You don't need to register if you already receive this publication digitally.

10 Million Tonne Milestone for NZ Aluminium Smelters

New Zealand Aluminium Smelters reached a milestone in December, pouring its 10 millionth tonne of aluminium and celebrated the 40th anniversary of the Tiwai Point smelter

Tiwai point supplies much of NALCO's aluminium billet used in the manufacture of your extrusion profiles. The smelter also supplies aluminium for 60% of the world's computer memory disks and 40% of the world's capacitors for cellphone batteries.



NALCO New Year Clearance Super Special

MAKE AN OFFER

Make us an offer! All products must be sold! Most available well below cost!

Material Code	Material Description (mm)	Length	Alloy and Temper	Quantity Available	NALCO Branch
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Sheet & Treadplate

101301	Sheet 3mm 1200 x 2400 PE (Dented)		5052 H32	1	Christchurch
102132	Sheet 4mm 6000 x 1500		5083 H116	2	Auckland
102275	Treadplate 2mm 595 x 1200		5052 H114	8	Auckland
100504	Treadplate 4mm 1485 x 1500		5052 H114	1	Auckland
100504	Treadplate 4mm 1500 x 2085		5052 H114	4	Auckland
100374	Treadplate 4mm 4500 x 1500		5052 H114	1	Auckland
101251	Treadplate 8mm 605 x 1300		5052 H114	1	Auckland

Extrusion

807169	Angle 32, 20, 1.5 (Arctic White)	5m	6063 T5	58	Auckland
808042	Angle 50 38 5	5m	6063 T5	34	Christchurch
816972	Curved Channel 50 35 (Scratched)	5m	6060 T6	2	Christchurch
810592	Round Tube 30 1.6	6m	6060 T5	38	Christchurch
803536	Top Hat 55, 28, 24, 2.4	5m	6063 T5	7	Auckland
807167	Zed 25.4 19.05 2.4 (Satin Anodised 12m)	5m	6063 T5	5	Hamilton

Plate and Bar

803506	Flat Bar 38 3 (Satin Anodised 12m)	5m	6060 T5	24	Hamilton
803528	Flat Bar 50 12 (Damaged on end)	5m	6060 T5	1	Christchurch
818410	Square Bar 139.7 (will cut to size?)	3.657m	6061 T651		Auckland
100527	Plate 254mm Range of sizes available		6061 T651	7	Auckland
100617	Plate 31.75mm 1524 x 3660 (will cut to size)		6061 T651		Auckland

Terms: Price excludes handling and freight. Items and discounts not available at all Centres. Limited quantities available at the special price and subject to prior sale. Available while stocks last.

China Likely to Curb Nonferrous Metal Production

About 1/3 of the aluminium capacity in China is likely to idle in 2012, the highest since 2009 due to a combination of rising energy costs and low nonferrous metal prices and part of an effort to reduce over capacity in the market. Klaus Kleinfeld, CEO of the Alcoa Inc, believes "China is likely to shut down 1.1 million tonnes of aluminium capacity in 2012".

China's aluminium output in 2012 is estimated to reach nearly 20 million metric tonnes

China is also likely to hold the expansion of smelters producing nonferrous metals including copper and aluminium over the next five years to reduce overcapacity and energy consumption. Despite this however China's largest coal producer, has started construction on a new project capable of producing alumina from coal ash, recycling a waste by-product of thermal power generation.