11 November 2014

# PneuDrive Challenge 2014Engineering Design Winners Announced

**Johannesburg: Submissions to this year’s annual engineering design, competition which has been running since 2008 and currently sponsored by SEW-EURODRIVE and Pneumax, revealed that there is indeed young engineering talent in South Africa that deserves to be nurtured and developed.**

After two intensive days of judging and deliberation the panel, made up of a range of local engineering experts, concluded and agreed that the "Movipal" from Stellenbosch University was the winning design entry.

This year’s competition, which had as its theme – Green Warehousing Logistics – called on students to analyse and then design a solution for a specific operational problem in one of the following areas of a warehouse: Retrieval, Conveying, Placement, Packing, Palletising and Loading.

The top three places for engineering design went to:

1st – Stellenbosch University – MOVIPAL

2nd – Nelson Mandela Metropolitan University –TetraStack. Who were also awarded the Innovation prize.

3rd – WITS University – The Out-The-Box-Palletiser

**Business Learning Platforms + Opportunity = Developing Talent**

An important principle of the PneuDrive Challenge is to provide a learning platform that allows mechanical, electronic and mechatronic engineering students to participate in an experience that brings closer together academic potential and the real needs of business. In reality, successfully bringing all the academic, design and business elements together is a big step required of students who have had limited interaction with industry. However, this is one of the main objectives of the design competition – to give students at least one new tool, one new idea, one new experience that will completely turn around their current perceptions and understanding of how they can use drive and pneumatic engineering principles to influence the warehousing and logistics industry.

One of the biggest challenges South African business faces is the need for students entering industry to be able to get up to speed quickly. It is business that needs to offer the support of learning experiences that allow students to apply academic knowledge on a practical business level. The competition, which has been run annually since 2008, shows that with structured business support and intervention that it is possible to provide learning platforms that bring together engineering theory, the latest technology in drive engineering, pneumatics, and business relevance.

**1st Place – Stellenbosch University – MOVIPAL**

Students Landolf Theron, Herman Nieuwoudt, Jos Van der Westhuizen and Stefan Nel proposed a mobile palletising solution. Their design addresses the problems associated with two warehouse operations, namely palletizing and local transport, and combines the functionality of a gantry style palletiser and a forklift, providing a mobile palletizing solution. The target of the MOVIPAL is small to medium sized warehouses in the production and logistics industries.

**2nd Place – Nelson Mandela Metropolitan University - TetraStack**

TetraStack™, an Ultra High Throughput Warehouse Defragmentation System designed by Adriane Bestic, ShuldhamPeard, Ashley Naude and Christopher Sephton was an idea based on the popular Tetris game. Their design mirrors the sorting action of the game by continuously rearranging crates within a racking matrix so as to consume the least amount of space, as low down in the matrix as possible.

**3rd Place – WITS University – The Out-The-Box-Palletiser**

Students Gareth Krisch, Adam Bartels and Eitan Kassuto presented a design that could be a solution to manual labour palletising problem by proposing a stand-alone, mobile and flexible palletising device. Their design could provide warehouses which mainly make use of manual loading with an alternative application that could reduce running costs, increase productivity, improve worker safety and has the potential to be flexible enough to fit in with most line palletising operations.

**The Judging Team**

As in previous years, the judging panel was made up of specialists with a wide range of business and engineering experience. The feedback they provided on the entries indicates that South Africa’s engineering community can expect to receive a number of energetic and innovative young engineers into their ranks in the near future.

This year’s judging panel were made up of Piergiorgio Bertoldi (MD Industrial Electronic Services), John Menasce (Lead Mechanical Engineering Consultant from HATCH), Norman Maleka (SEW Eurodrive Electronics Manager), Russell Gill (SAFPA Council Member), Brandon Skinner (E&I Engineer from DRA Mining), Heathcliff Barnard - (Technical Manager Pneumax), Andre Badenhorst - (Technical Director from SAR Electronics SA) and Theuns Greyvenstein (Ombudsman - Maxolution Application Engineer, SEW-EURODRIVE).

**Accelerating the Speed to Competency**

The approach of this year’s competition to offer a learning platform that presents warehousing and logistics challenges and business problems alongside the latest technology used in the industry, is a platform that many, if not everybody, engaged in South African business would support. It is business that needs to support learning experiences that allow students to apply their academic knowledge on a practical level and in conjunction with the latest technology that is available.

The sponsors, organisers and judges of this year’s competition believe that students who immersed themselves in the competition, showed the right academic credentials and displayed appropriate problem solving skills, essentially have begun to open their own doors and begin to take a confident first step into the engineering industry.

The winners received a ten day all expenses paid trip to Germany and Italy where they will be hosted by the head offices of the sponsor companies. Furthermore, more than R 300 000 worth of products from SEW-EURODRIVE and Pneumax will be made available to participating university to make the latest drive and pneumatic technology available to future students.

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| Stellenbosch University - MOVIPAL - PneuDrive Challenge 2014 Winners |  | |
| MOVIPAL - Mobile Palletizing Solution |  | |
| **The 2014 Judging Panel, from left to right**:  Norman Maleka- (SEW-EURODRIVE), Theuns Greyvenstein (SEW-EURODRIVE), Andre Badenhorst - (SAR Electronics), Brandon Skinner - (DRA Mining), John Menasce (HATCH), Heathcliff Barnard - (Pneumax),PiergiorgioBertoldi (Industrial Electronic Services), Russell Gill (SAFPA) | |  |

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