

MechCaL Honoured at MVSSA Awards

Pretoria, 18 July: MechCaL was recognised with top honours at the Mining Ventilation Society of South Africa (MVSSA) awards ceremony in recognition of their contributions to industry knowledge and research.

Principle Engineers Michael Minges and Michael Schildhauer received the Society prize for Best Paper of the Year for their paper titled “Development of an Efficient Axial Flow Fan” – which was published in the Q4, Volume 68 of the MVSSA journal in 2015.

Their paper examines the development of an efficient axial flow fan and describes the selection of the fan performance criteria in terms of static pressure versus flow rate. A brief overview is given of the aerodynamic procedure and some CFD results are presented. Mechanical design issues are also described in the paper, including stress analysis on the rotor as well as designs to improve the vibration levels of the rotor. Finally, experimental test results are compared to CFD predictions and the targeted duty curve. What their research found was that fan efficiency peaked at 80%.

The Mine Ventilation Society of South Africa has, for more than seven decades, provided a forum for mine ventilation professionals to share and improve knowledge and research into issues of mine ventilation. The Society publishes textbooks and training material, is involved with national and international conferences in the field, and publishes a regular Journal. Many members of the MVSSA, both past and present, are considered to be global experts in the field of mine ventilation.

Michael Minges attended the 72nd Annual General Meeting of the MVSSA to receive the award and commented on the importance of authored papers such as theirs to the mining ventilation industry. “We are very proud and honoured to have received this acknowledgement by the MVSSA. The MVSSA has many important role players as members that influence the way that mines in the region are designed and ventilated. It is important for MechCaL as a fan manufacturer to show the industry that as a supplier we endeavour to keep developing and designing better products in the mine ventilation market space.”

Current MVSSA President, Neil Roman, commented on the value of Minges and Schildhauer’s paper to the local mining industry, saying: “While large main fans have improved in efficiency and design over the years, and energy efficiency of large fans is often subjected to intense scrutiny during selection, smaller axial flow fans used in underground mines are typically of ‘off-the-shelf’ design and of reduced energy efficiency. A large mine may have a fleet of smaller fans that substantially exceeds the total power consumption of their main fans.”

“A number of MVSSA members have been involved with MechCaL’s efforts at improving auxiliary fan performance over the years, and as custodians of ventilation-related energy consumption as well as workers’ exposure to noise, we commend the authors and MechCaL on this useful and timely contribution, and congratulate them on their excellent paper,” said Roman.

MechCaL Acting MD and Spokesperson, Prof Jan du Plessis, affirmed that displaying their industry expertise and experience and MechCaL's commitment to the industry forms part of their business objectives. "Being part of the MVSSA and presenting papers through their forums is vital to our strategic marketing initiatives and it allows us to network with the right people and understand the industry needs and future targets. It also shows the industry our desire to develop for their requirements," says Prof du Plessis.

The "Development of an Efficient Axial Flow Fan" paper is available from the MVSSA website. Visit www.mvssa.co.za for more information.

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About MechCaL:

MechCaL Pty Ltd was established in 2002 to design and manufacture industrial fans. The company has developed proprietary software that allows for high efficiency designs to address the much-needed green economy to reduce CO2 emissions to the atmosphere through using less energy while providing the same performance. At their manufacturing facilities in Pretoria, MechCaL focuses on developing specialised fans using advanced design tools and materials. Every fan is designed for a specific application tailored to suit the needs of each client by matching the required performance with optimised efficiency.

MechCaL has been awarded the prestigious Technology Top 100 award six times and has been a runner up four times. They have also won the Enabling Award from Frost and Sullivan. All of this success was garnered from reinforcing advances in technology to enable savings.

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