

# Annual Dinner and awards ceremony

The SAIW's 61<sup>st</sup> Annual Dinner was held at the Gold Reef City Casino Convention Centre on June 26. Guests from the full spectrum of the welding industry were treated to a three-course meal, then entertained by the cabaret performer Michael De Pinna, who also compered the evening. Joseph Zinyana announced the annual awards winners, which were presented by the SAIW president, Professor Andy Koursaris. *African Fusion* reports:

“This occasion offers a wonderful opportunity to get together with colleagues and friends, to make merry and to take stock of the past year,” says Koursaris in his welcome address. “It is a good opportunity to acknowledge and reward those who have made significant contributions to the Institute and the industry over the past year. These people are volunteers, who give of their time and talent to serve the Institute, the profession and by extension, the society at large,” he points out.

After dinner, Michael De Pinna invited SAIW councillor Joseph Zinyana and Koursaris up to the front to present the annual awards.

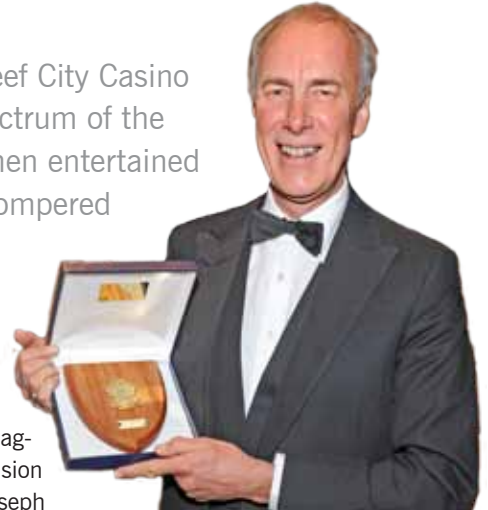
## Phil Santilhano Memorial Award

“The first award for the evening was the Phil Santilhano Award, for the

best student on the Institute's flagship courses in Welding Supervision and Inspection,” announces Joseph Zinyana.

The winner, Emily van der Schyff, achieved distinctions in both the Level 1 and Level 2 Inspector courses within the past year. In only two years, she has progressed from a clerical backroom documentation position to become an important member of the quality assurance function at Stainless Fabricators. Her specific responsibility is the coordination of the welding inspection team's activities.

Presenting the award, Zinyana says that in the 25 years that the award has been made, this is the first time it has been presented to a woman. “We are extremely proud of the recognition that these qualifications hold in industry, and anyone attending these courses will testify that they are very demand-



AFSA executive director Mark Krieg displays Tony Paterson's prestigious award.

ing and, to achieve a distinction, really takes special effort.”

The award includes a R15 000 voucher for training on any of the Institute's courses.

Phil Santilhano is best remembered for his groundbreaking research and development work carried out on submerged arc and electro-slag welding of heavy wall pressure vessels while employed by Vecor. He became the Institute's first full-time employee when he was appointed technical director in 1977.

Unfortunately Santilhano passed away shortly after joining the Institute, and in 1948 a memorial award was established in recognition of his contribution to the development of welding technology.

*African Fusion* had the privilege of publishing 2009 Harvey Shacklock Gold Medal Award recipient Louise Petrick's paper in August last year. This is the second year in a row and the third year out of four that the award has been made to a female principal author.

Petrick and co-authors Andrew Carr and Papy Mwilambwe of Eskom, presented the paper entitled 'Insight into the weld repair and refurbishment of 1960s thick walled, pressure containing steel castings', at the SAIW's 60<sup>th</sup> Anniversary Conference in May last year.

Harvey Shacklock was the manag-



Proud Harvey Shacklock Gold Medal Award winners, from left: Andrew Carr, Louise Petrick and Papy Mwilambwe, pictured with Andy Koursaris.



Michael de Pinna at his best.

ing director of British Oxygen Company (BOC), now Afrox. He was instrumental in founding the South African Institute of Welding, and was unanimously elected its president on 1 March, 1948. This award was formed in memory of his contribution to the welding industry, and was first presented in 1949.

"This award is not presented every year if papers are not of a high standard, and one of the by-products of the computer age is that a technical presentation is much easier to prepare than a technical paper," Zinyana says. "However, this year is different as the Institute's 60<sup>th</sup> Anniversary Conference meant that there were many other high quality papers to choose from."

BOC, now Afrox, part of the worldwide Linde Group, is the generous sponsor of the award. It has been presented to many leading lights of the South African and international welding industry since 1949.

This paper is available on the SAIW website's *African Fusion* September 2009 link

### Harvey Shacklock Award

The final award for the evening was the Institute's prestigious Gold Medal Award, which was first introduced in 1966. It is the Institute's highest award and can be made to a company or individual in recognition of outstanding contributions to welding technology or to the Institute.

"In our 61<sup>st</sup> anniversary year, we are pleased to have a winner who is widely acknowledged for his contribution to both," says Zinyana. "Dr Tony Paterson has several degrees from Wits and Pretoria universities, and obtained his

PhD at UMIST in the UK in 1983. He was executive director of the Aluminium Federation of South Africa for some 18 years, and for the last five years or so, has filled the role of aluminium specialist at AFSA.

"Tony is a champion of aluminium and if, in the last 25 years or so, you have needed to know anything about fabricating and joining aluminium – you have dealt with Tony Paterson," he says. "He has presented many papers to national and international conferences and is the author of several aluminium publications.

"In recent times, he has focused on developing technology for extending the range of applications for aluminium, and he has had a relatively simple message – make sure that the joints are positioned in low stress areas and ensure that there is good fit-up!

This is something that we have all heard from him. With this message, he

has had some noticeable successes particularly in the mining and road transport industries."

Zinyana says he is continuing with his work in developing new applications, but is also actively involved in legislative matters, technical standards and development of training courses and training material for the national qualification framework. "Tony is a good supporter of local universities, placing development projects with them, and often presents courses for under-graduate students. He is also a longstanding friend of the Institute where he continues to give valuable input to its boards and committees, as well as lecturing on many Institute courses.

"On top of all of this, Tony is Mr Nice Guy and a warm and generous person," Zinyana adds.

The gold medal award is made in recognition of outstanding contributions to the development and application of welding technology, and the citation reads: 'In recognition of an outstanding contribution in the use of welding and fabrication technology to develop applications for welding'.

Paterson was away at a family wedding, and AFSA executive director Mark Krieg accepted the award on his behalf.

"The global economy is in dire straights," says Koursaris, "which is affecting South Africa more and more because it relies largely on selling minerals and primary products to the rest of the world where manufacturing is in tatters. The Institute has taken appropriate steps and adopted policies to minimise the effects of the recession on its activities. So in a nutshell, next year's dinner is already guaranteed," he assures guests.



Phil Santilhano Award winner, Emily van der Schyff and Andy Koursaris.

# Nuclear industry localisation opportunities –

## advanced planning needed, warns SAIW

While a change in design from electricity generation to a more versatile concept that can provide both electricity and process heat, has resulted in a delay in the Pebble Bed Modular Reactor (PBMR) programme, it has broadened the potential customer base significantly. To this end, Pebble Bed Modular Reactor (Pty) Ltd, recently held a nuclear industry workshop to address the manufacturing, construction, operating and maintenance requirements of the plant to the NIASA (Nuclear Industry Association of South Africa) membership, as well as to current and potential nuclear industry suppliers. *Dale Kelly* reports back on SAIW executive director Jim Guild's presentation on the Institute's contribution to the localisation of welding and fabrication for the nuclear industry:

**H**aving listened to a variety of speakers during the course of the morning, Guild was justifiably forthright in his opening statement: "All this nuclear technology – wonderful stuff, and all these fancy rules and regulations – and you're going to give it to a Standard 8 welder to build it for you! Are you mad?"

"Actually, it's not entirely wrong if you give the work to a competent

company, it will ensure that the equipment is properly designed. It will have appropriately trained and experienced supervisors, engineers and inspectors, and the welders will be properly code certified," he says. This is something that the fabrication industry has been doing for years.

"Incidentally, welding technology is at least as complex as nuclear technology. It's been around a lot longer, it's

used a lot more, and it's really quite complex," he says.

The key areas in which the SAIW could assist in the localisation of the nuclear industry include: skills development; certification of welding and fabrication companies to ISO 3834; technology transfer and technical support for small fabricators in particular; and in the establishment and administering of personnel for certification.

Guild outlines the importance of the International Institute of Welding (IIW) and the fact that the SAIW is an IIW Authorised National Body (ANB). "The IIW has 54 member countries which include all the major global players in welding technology. If you want to know something about welding technology, and you want to be involved at the forefront of it, you had better be involved in the IIW," he says.

"It has commissions studying every aspect of welding – economics, fatigue, materials behaviour – you name it, they have got it. There are select committees, study groups, education and training programmes which are of interest right now, together with company qualification systems."

In terms of the training and qualification of people, IIW has a programme it has been running since 1998, which it took over from the European Welding Federation (EWF). This has now been made accessible to countries outside of Europe.

The way that IIW implements its training and qualification system is that it has an international authorisation board with delegated responsibility to appoint one organisation in each country as an IIW Authorised National Body, and the SAIW is South Africa's ANB. "It might sound simple – one organisation is appointed in each country – but what it means is that you have to jump through a lot of hoops. The IIW sends out auditors and assessors every two years to come and check you, and you have to pay for them," Guild says, add-



SAIW-trained welding inspectors at an awards dinner in February 2009. "You should be thinking about nuclear construction code inspectors now," urges Guild, "or are we going to be bringing in hundreds of these from the States?"



*A highly-skilled TIG welder working on an energy recovery hood at ISO 3834 certified welding fabricator, Engski Manufacturing.*

ing that at present, the SAIW's auditors come from Holland and the UK.

"We are accredited for the full scope of IIW qualifications which means welding engineers and technologists; the welding specialist, which is at senior foreman supervisor level; and welding inspector or practitioner, which can be a charge-hand or a welding instructor; and then the welder himself."

The IIW system for company certification is based on ISO 3834, which is the standard applicable for quality system requirements for welding. As welding is considered a special process, ISO 9001 is not applicable to welding operations.

"The way that IIW implements the system is just the same," Guild says. "In terms of this international authorisation board, one organisation is appointed in each country, and it's the same process. They will send somebody to assess you and you will jump through a lot of hoops.

"We initially did our accreditation through EWF because IIW hadn't taken over the system. We went into an arrangement with one of our local fabricators, and Peter Viljoen from Stainless Fabricators is at this workshop, so he won't mind me mentioning it. He was there when the IIW auditors assessed the SAIW for carrying out the audit on Stainless Fabricators.

"It's a complex business, but it has given us quite a bit of scope," he says. "It means that South Africa's fabricators are recognised in terms of quality cer-

tification in the system that's operated by the world's leading welding body. It means that we avoid quality accreditation being used as a non-tariff barrier for fabricated exports."

In an aside, he says that Stainless Fabricators was approached by a Canadian company to manufacture a vessel in Central Africa, but was unable to tender because they didn't have the ASME U-stamp. "However, when they went back and said they had ISO 3834 certification, they were able to tender and won that tender.

"Technology transfer involves many things including conferences, seminars and workshops. "Our IIW regional assembly was held in Stellenbosch in 2006, and we had 35 of the world's top welding experts presenting and sharing information." The SAIW holds seminars on a regular basis, the most recent of which was conducted by stainless steel expert Damian Kotecki, who presented in Johannesburg, Durban and Cape Town.

"But technical transfer and support means more than that," Guild says. "We can provide engineering specialist level support in welding and materials technology, because our people are qualified in welding and metallurgical engineering. The areas we focus on are quality improvement, productivity improvement, problem solving and development work."

Typical activities in technology transfer and technical support include the audit of current workshop practices

– companies that ask for a welding engineer to look over their workshop practices, and to advise and assist in troublesome areas. "Also very important in the area that we are talking about at the moment, is welding procedure, development and approval. This needs to be absolutely controlled and properly done so that when we give the task to our welder, he has every chance of doing it correctly."

On welder certification, he says it is important that welders are properly certified, "and when you are building to construction codes, they have to be certified. But let's make sure that it is done properly, and not simply a figment of somebody's imagination," Guild urges.

"We provide in-house training for specific production environments. Often, and I am thinking here about the automobile industry – they will have a problem in a particular area, and we will send a consultant along who may advise on the correct MIG/MAG procedure for example, and possibly recommend training for a few weeks to get things right.

"And then failure investigations. I'd prefer to say investigations as a whole rather than just failure investigation. But failure investigations attract attention, which sometimes require involvement in legal cases, and we do that kind of thing."

The SAIW is also involved in establishing and administering personnel certification systems. A question that often arises is why certification is necessary. "I have got my degree; why do I need further certification?" Guild says. "Interest in personnel certification programmes is expanding quite significantly, and that's largely because qualifications are being used for the entry of younger people with less experience, to get them into the industry.

"You get your inspector's qualification or whatever it is, and it gets you a job. However, having been through a course and having got the job – still doesn't mean that you know a heck of a lot. So companies are finding that certification is useful to differentiate between what we might call less experienced people and a well-established person. It is useful because it includes specific experience requirements and is a statement of competence in a specific field."

SAIW personnel certification pro-

grammes comply with ISO 17024, the applicable standard for bodies certifying persons, and currently include:

- Pressure Vessel and Boiler Inspectors for both new construction and in-service equipment, which has been running since 1992 and 1999 respectively.
- NDT personnel, which the Institute has been running since 2004.

These activities are audited by SANAS. There are other personnel certification activities in the pipeline.

“Process plant inspector certification is coming to fruition this year. We are working with Sasol and other refinery plants to get that programme in

place. And we are planning to introduce welding inspector certification in South Africa once the IIW releases its rules and requirements, which we expect to be by the end of the year.

“You should be thinking about nuclear construction code inspectors now,” he urges, “or are we going to be bringing in hundreds of these from the States? Are we going to let local people participate in this, and how should we do so? Some thought needs to be given to this issue, and it needs to be given now; not in six months or even five minutes after the order has been placed. That will be too late. We need to think about this in advance!”

What is important to note, is that although the SAIW is approved for the full range of IIW qualifications, this doesn't mean that all training has to be done at the Institute. Although the SAIW will conduct the examination and issue the diploma, it can approve other organisations for presenting these courses.

This is already being done at some organisations.

“In terms of the welding engineer, this can't be done by the SAIW. This

is handled by Wits University which is accredited by SAIW to run the International Welding Engineer (IWE) programme. We expect that Pretoria University will be accredited for the IWE programme within the next 12 months. Professor du Toit is very keen that this is done, and I am certain that it will come to fruition.”

Looking at welder certification, the East Cape Midlands College in Uitenhage is IWE approved, and runs that programme very successfully.

“What is pleasing is that we ran our Young Welder of the Year competition in February this year, and it was won by a welder from the East Cape Midlands College. He is off to Calgary this month (September) to represent South Africa.”

In conclusion, Guild says the SAIW is part of Team South Africa. “We need Team South Africa to ensure that work is driven in the localisation programme as much as possible. Let's not talk and pretend about it; let's do it and this means advanced forward planning. We can't wait for a final order,” he reiterates, “there has got to be some money put in upfront to make this dream a reality.”

### Enriched pebble fuel heads for Russia

In a first for Africa, South Africa's PBMR in collaboration with NECSA, has manufactured high temperature reactor fuel spheres containing 9,6% enriched uranium. Sixteen of these spheres have been shipped this month (September) to Russia for irradiation tests to demonstrate the fuel's integrity under reactor conditions. The tests will start in January 2010, and will take some two years to complete.

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