



President's Message

Welcome to my first report since becoming President of The Mining Institute of Scotland (MIS) in October. I've been a member of the MIS since 1981, on the Council since 1986, Treasurer since 1996 and although no longer working in the minerals industry, I was honoured to be elected by Council to take on the role of President.

In my *Presidential Address* I was able to link one of the IOM3 disciplines and driving a motor vehicle. In my opinion, both are important ingredients in business within Scotland. For example, both play a role in sustainability and both will contribute to the overall well-being of this country.

Planning of the calendar for the year went fairly smoothly with assistance coming from various directions, both within the MIS and outwith. With such a wide variety of professions and skills within our organisation, I hope everyone will find something in the programme of interest to them.

This year, congratulations are due to Kate McGregor from Adam Smith College, Glenrothes who won the IOM3 Technician of the Year award. A small group of Council members were able to meet Kate at the College to celebrate her award. This follows on from the success of Abbas Delavar who reached the international (World) final of the Young Persons' Lecture Competition.

Work in student recruitment is progressing well with new members coming from several centres of education, both in the central belt and the north-east. Although I wasn't present at St Andrews University on 4 October, the event went well with presentations made by Karen Dalglish and Craig Durham, both former MIS Presidents. Also ongoing at the moment is the formation of a history of the MIS with the authors gathering information from both written and personal sources. I would like to thank everyone for their continuing efforts in these important tasks.

In conclusion, for the time being, I hope to see as many of you as possible at the MIS events and have a pleasant time over the upcoming festive period.

Ian Purdie

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Technician of the Year

The Mining Institute of Scotland has again seen one of its members win an award. Each year, the IOM3 makes two awards for the Technician of the Year. The awards are open to all those currently studying materials or minerals technology or related subjects and those who have completed such courses within the last two years.

Kate MacGregor, who studied for an HND in Petroleum Engineering at the Adam Smith College in Glenrothes recently won one of these awards. Kate now works in the oil industry in Aberdeenshire.



Kate receives her prize from Jan Lewis, IOM3 President



Kate pictured with the Principal of the Adam Smith College and representatives of The Mining Institute of Scotland

Presidential Address

Ian Purdie delivered his Presidential Address at the AGM held on 10 October 2013. Entitled *It Starts on the Road Home*, he traced the life of oil from its creation to its end use as a transportation fuel.

To date we have recovered some one trillion barrels of oil from the earth. A barrel is around 159 litres of which, on average, 73 litres is processed into petrol; 41 litres into diesel with the rest going to lubricants, chemicals and aviation fuel. Around 90 million barrels of oil are used every day and that is steadily rising. There remain about 1.5 trillion barrels in conventional oil fields and perhaps 3 trillion barrels in oil shales. A lot of these reserves are in politically sensitive parts of the world and cannot necessarily be depended upon. It takes millions of years for an oil field to develop so we can't rely on new resources forming as we are using the existing reserves.

There are of course alternatives to oil such as biodiesel but the required crops use up valuable food growing land and the vehicles still pollute. Perhaps we need to look at our use of motor vehicles to try and reduce both our dependence on them and the amount of oil we are using. Ian identified various factors having a major affect on the amount of fuel we use, so although we may not be able to avoid using our cars, perhaps we can make what oil we have last a bit longer.

The Address concluded with an invitation for Members to "have a go at Ecodriving on the journey home tonight".

MIS Trust

The Mining Institute of Scotland (MIS) Trust offers several educational awards. The 'Educational' objects of the Trust are primarily the awarding of scholarships and funding to promote education in mining generally. There are two types of scholarships: firstly, The Sam Mavor Travelling Scholarship, which allows qualifying individuals to visit places, works and mines which may be of special interest to them. Secondly, The Cunningham Scholarship, which is awarded to further education in the science of mining including instruction affording an insight to contemporary mining methods. In this context the Trustees are obliged to give preference to applicants who have a significant connection with Fife. Additionally, there is funding available to benefit mining education in the UK and for obtaining scientific knowledge and technical information conducive to the efficient and safe working of coal and other stratified deposits by hosting or sponsoring conferences etc. 'Mining' in the above context includes any extractive industry (e.g. oil & gas) and related services (e.g. geology). Enquiries should be directed to the Trust's Honorary Secretary/Treasurer (mrkeith.donaldson@virgin.net).

YPLC 2013

It's that time of year once again to get your application in for the Scottish Heats of the IOM3 Young Persons' Lecture Competition, at least if you are under 28 on 1 June 2013. If you don't qualify, then why not encourage a younger colleague to enter with a chance to win £250, and represent Scotland in the UK final at the Armourers Hall, London. In addition to the winner's prize, 2nd will receive £150, and 3rd will receive £100. As an added incentive, the UK winner will go on to The Young Persons' World Lecture Competition to be held in Hong Kong.

Our local heat will be held on 6 February 2013 in the Irvine Lecture Theatre, University of St Andrews. Entry Forms and further details are available from the Secretary (D.Seath@btinternet.com).

The aim of the Young Persons' Lecture Competition is to provide an atmosphere of friendly competition for young Materials, Minerals, Mining, Packaging, Clay Technology and Wood Science Scientists and Engineers so that their presentation skills will improve whilst addressing an informed audience.

The Competition, sponsored by IOM3 with support from the Worshipful Company of Armourers & Braziers, consists of a number of lecture competitions organised by the local societies, from which six entrants, one from each region, will be selected to compete in the National Final. The competition is open to anyone who is following, or has followed, a course in any aspect of Materials, Minerals, Mining, Packaging, Clay Technology and Wood Science, Science and Engineering. However, students and graduates from industry or academia must be age 28 or under on 1 June 2013.

Each entrant will give a presentation lasting not more than 15 minutes on a subject of their choice about any aspect of Materials, Minerals, Mining, Packaging, Clay Technology and Wood Science Engineering. Marks will be awarded for (a) structure of the lecture, clarity of explanation and argument; (b) standard of presentation, clarity of diction, personal enthusiasm for the subject, ability to deliver lecture spontaneously; (c) clarity and relevance of any visual aids used; (d) calmness and competence in handling judges' questions; (e) technical content of the presentation; (f) ability to deliver a concise meaningful summary at the end of main points; and (g) clarity and relevance of the entrant's abstract. Marks will be deducted for over-running of lecture time. Travelling expenses will be paid for by MIS.

Should you wish to enter, please note that the Entry Form has to be returned to the Secretary by 21 January 2013. For this local event it has been decided to use the Abstract for selection of the final six (6) candidates going forward to make their presentation on 6 February. As more than six entries are anticipated, candidates must give careful thought to the content of the 150 word maximum Abstract.

Downhole Metallurgy

Ed Wade returns to Aberdeen in April 2013 to give his authoritative Downhole Metallurgy course in conjunction with MIS and the Petroleum & Drilling Engineering Division. The course provides a structured approach to the selection of casing, tubing and downhole equipment in different well environments. Key material properties and corrosion issues will be considered together with Industry Standards such as NACE and API 5CT. This course, which is IOM3 PD Certified, is a must for Drilling, Completion and Petroleum Engineers. .

This course is always oversubscribed so early booking is recommended. Profits directly support the MIS Arkwright Scholarship programme so now there is even more reason to attend.

Details are available on the MIS website (<http://www.mining-scotland.org/pdfs/Downhole-Metallurgy-16-17Apr2013.pdf>).

AN INSTITUTE EVENT IS THE PLACE TO MEET FRIENDS AND COLLEAGUES BOTH OLD AND NEW, WHY NOT JOIN WITH US?

CALENDAR OF EVENTS

TECHNICAL MEETINGS

16 JANUARY 2013 – 7.30PM AT THE BRITISH GEOLOGICAL SURVEY, WEST MAINS ROAD, EDINBURGH WITH VIDEO LINK TO BP, ABERDEEN & UWS, PAISLEY

Between a rock and a hard place. How sustainable is critical metal supply?

Speaker: Andrew Bloodworth, BGS

20 FEBRUARY 2013 – 6.30PM AT BP, ABERDEEN WITH VIDEO LINK TO HW-U, EDINBURGH & UWS, PAISLEY

Andrew Area Development – Concept to Construction

Speaker: Lee Lothian, BP

21 MARCH 2013 – 6.30PM AT THE LOCHSIDE HOUSE HOTEL, NEW CUMNOCK, AYRSHIRE

TBA

Speaker: William Wishart, Scottish Resources Group

25 APRIL 2013 – 6.30PM AT THE GARVOCK HOUSE HOTEL, DUNFERMLINE, FIFE

Unconventionals

Speaker: Professor Brian Smart

OTHER EVENT

6 FEBRUARY 2013 – 2.00PM AT THE UNIVERSITY OF ST ANDREWS

Young Persons' Lecture Competition 2013

SOCIAL EVENT

8 MAY 2013 – 12 NOON AT THE LOCHSIDE HOUSE HOTEL, NEW CUMNOCK, AYRSHIRE

Retired Members' Lunch (Ayrshire)

Arkwright Scholarship

Our most recent Arkwright Scholar has sent in the following profile:

“My name is Catriona Sinclair and I am a fifth year pupil at George Watson’s College in Edinburgh. I am very pleased to have The Mining Institute of Scotland as my Arkwright sponsor.

After completing my Intermediate 2s last year I am studying six subjects for Highers this year: English, Maths, Chemistry, Biology, Physics and Technology.

I am really enjoying Technology this year, particularly the Electronics topic. This has been useful as another girl and I are working on a project outwith class this year involving the Raspberry Pi computer, which has been very interesting, if quite complex. We are programming the computer with the hope that it will be able to control a robotic car.

I am hoping to study Engineering or a broader Science based course at University, as I’m not really sure what career I’d like to pursue yet. I am looking forward to learning more about the Institute and its work.

In my spare time I play the oboe and am in several orchestras. I have finished my silver Duke of Edinburgh award and am aiming to complete my gold award over the next two years.”



Catriona pictured with Dr Richard Crockett receiving her award

COUNCIL 2012/13

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GRAHAM SMITH (CONFERENCE ORGANISER)

JIM SOMERVILLE (UNIVERSITY LIAISON)

ALLAN THOMSON (MIS TRUSTEE)

VACANCIES (4)

*** DIRECTOR OF THE MINING INSTITUTE OF SCOTLAND**

SPECIFIC ROLES OF INDIVIDUAL COUNCIL MEMBERS ARE GIVEN IN BRACKETS.

Petroleum & Drilling Engineering Division Update

The Division has enjoyed another successful year with membership sustained at just over 1,000, while the overall membership of the IOM3 has continued to decline and currently stands just over 16,000. This is a reflection of the health of the oil and gas industry worldwide. Non-conventional hydrocarbons (e.g. shale gas) are a hot topic at the present time and it was encouraging to see the UK Government moratorium on shale gas fracturing lifted. Articles in *Materials World* have failed to mention that the UK is recognised as having the most robust regulatory framework in the world for hydrocarbon production. This is a legacy from the response to the Piper Alpha tragedy. The regulations have recently been strengthened with the issue of Guidelines capturing good industry practice and the lessons learnt from the Macondo and Montara well blowouts. The UK is now the only country in the world to have full life cycle well integrity guidelines applicable to both onshore and offshore wells. In addition the United Kingdom Onshore Operators Group are currently finalising additional Guidance applicable to fracturing. The development of these Guidelines, both by Oil and Gas UK and the UK Onshore Operators Group, will be the subject of the February technical meeting.

As we close the year, on behalf of the Division Board, I would like to wish you all a very Happy Christmas and hope that you have a successful 2013. There will be plenty of opportunities to get involved with the Division in 2013, please feel free to contact myself or any of the Board members to find out more. As always I would encourage you to use the Division website at www.iom3.org to keep updated and please forward any relevant articles to Margaret Copland for publication on the website.

Steve Bedford.
P&DE Division Chairman

SECRETARY'S ADDRESS

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Crossford
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Members can receive all correspondence by email. Please contact the Secretary if you wish to receive correspondence electronically but currently don't.

Student to Technician

Approval has been granted for student members who have achieved a work based learning programme such as an HNC and/or HND level course of study, to be awarded the IOM3 grade of Technician (TIMMM) in recognition of their achievement and encouraged to progress to professional registration as an Engineering Technician (EngTech) when they can satisfy the EngTech competence and commitments at a level appropriate to IOM3 and the Engineering Council.