

# **IMOA**

# **Annual Review**

# **2011/2012**





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# IMOA Annual Review

## Overview from the Secretary-General

This report reviews the Association's activities on behalf of its members and in support of the molybdenum industry from July 2011 to June 2012. It highlights the progress we have made in relation to the priorities that were set out in the Strategic Plan.

### Health, Safety and Environment

Since achieving its 2010 objective of registering eleven molybdenum substances, IMOA's REACH Molybdenum Consortium (MoCon) has continued work in a number of key areas. These include a twelfth substance dossier, an updated terrestrial risk assessment and the compilation of some 140 studies and reports commissioned for MoCon REACH substances into an

and communication, including reviewing draft regulatory reports and engaging in a number of moly-related technical dialogues around the world. 'MolyNews – HSE Alert', our new periodic HSE bulletins, were introduced during the year to brief members on emerging issues and HSE news.

### Market Development

IMOA's Market Development team and committee continue to promote the use of molybdenum worldwide and to explore and research its greater use in a wide range of applications. In the carbon steel sector, high strength steel for truck frames, dual-phase automotive steel, martensitic steel and engineering steel



Tim Outteridge  
Secretary-General

online library. Throughout last year, the MoCon Secretariat also continued to support member co-registrants with the preparation and submission of their REACH registrations. The MoCon Technical Working Group continues to meet twice yearly.

In addition to REACH-related activity, IMOA's HSE activities continue to pursue progress in research, regulatory activities

have all been areas of focus over the last year. Our activity in support of stainless steel applications has been similarly busy, with participation in conferences and seminars in developing and mature markets as well as joint projects and communication activities with our partners in Team Stainless.

We are sponsoring research to evaluate the beneficial effects of molybdenum and to encourage its use in grades or applications where it has more potential or is not presently used. Three projects evaluating the use of molybdenum in alloy steels, for pipelines, heavy gears and automotive frames will all be completed this year. Two stainless steel projects are ongoing, one focusing on ferritic stainless steel in architecture and the other examining the effects of atmospheric corrosion. A project examining the corrosion resistance of stainless steel in alkaline environments was successfully completed in April 2012. A market research project on scrap use and availability has been completed and a further project examining molybdenum in stainless steels stocks and flows will be finalized this year.

## Communications

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Coverage in target publications has been achieved successfully, with media releases featured in key North American and international journals. Further inroads were made into publications in China and India, helping to enhance IMO's reputation as the voice of the industry.

We also introduced a wider media engagement program, designed to raise the profile of molybdenum, its uses and properties. The program is intended to generate more trade press coverage about molybdenum's utility and the more specialist areas of application highlighted in Moly Review.

During the year, we conducted a review of IMO's communications collateral which recommended a more consistent visual style to unify design across the wide range of brochures, reports, periodicals and datasheets. A series of new templates designed to project a stronger and consistent brand identity is being implemented and will be applied

to all new collateral and to the reprints of existing publications.

The number of unique visitors to the IMO website continues to grow, as does the frequency of downloads of brochures and articles. Website content has been updated to include several articles translated into Chinese, a Spanish version of the duplex stainless steel brochure and many other content additions.

The website has grown considerably in size over recent years as content and functionality have been added. The current site dates back several years and work is now underway to refresh its design and improve the accessibility of its content. A user survey is being developed and the feedback, combined with the regular analytical data we collect, will be used to inform aspects of the final design. A review of all content will be undertaken in parallel with the redevelopment program.

## Sustainability

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In recognition of the increasing importance of sustainability criteria in materials specification and selection, we have continued activity to highlight molybdenum's contribution to sustainable development. A Sustainable Development Working Group, established in 2011, has convened twice a year to guide activity and monitor progress.



During the year, IMO introduced a dedicated area of the website, entitled 'MoRE FOR LESS', where examples of molybdenum's contribution are showcased in relation to the three key pillars

of sustainable development – Ecology, Economy and Society. Icons, developed for these themes, are used to illustrate how molybdenum impacts each of the three areas, in selected applications.

A series of more detailed case studies is being developed to highlight the sustainable benefits of molybdenum in a wide range of applications. Sustainability and 'MoRE FOR LESS' will be a key focus of our broader communications program in the future. Presentations highlighting molybdenum's sustainable credentials were given at the 'Metals for Energy and the Environment 2012' conference in Las Vegas and at the '7th Asian Stainless Steel' conference in Singapore in June 2012.

## Statistics

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IMO has set itself the goal of being the most accurate and trusted provider of historical data on the molybdenum market. We therefore continue to publish annual and quarterly statistics of molybdenum production and use, including year-on-year comparisons of key data supported by a more detailed report available to members on the IMO website.

## Membership

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IMO continues to grow as the international representative of the molybdenum industry. In the period of this report, we have welcomed three new members to the Association and we look forward to involving new and existing members in a number of important initiatives designed to promote the many benefits of molybdenum over the coming year.







# Health, Safety and Environment



Sandra Carey  
IMO HSE Executive



**IMOA is renowned for its accuracy, research and scientific rigor in all HSE matters, helping to ensure that all regulation of the industry is scientifically appropriate. Our HSE team maintains a watching brief for all regulatory matters which may impact upon the molybdenum industry and the interests of its members.**



# Health, Safety and Environment

## Key activities and achievements in 2011/2012

### REACH activity

IMO's REACH Molybdenum Consortium (MoCon) successfully achieved its objective of registering eleven molybdenum substances for the first tonnage band deadline (>1000 tonnes) in November 2010.



The Consortium has continued its scientific endeavours during 2011 across a variety of work streams, including:

#### PIDS for ferromolybdenum

A template Product Information Data Sheet (PIDS) for ferromolybdenum was developed and made available to the membership in five European languages (English, German, Polish, Slovakian and Spanish). Members can then tailor these templates to their company-specific requirements and provide them to their customers. Ferromolybdenum is not a hazardous product, but the provision of a PIDS along the supply chain promotes data awareness and encourages good material handling practices.

#### MoCon REACH Substance Portfolio

| Substance                                    | Lead Registrant                 | EINECS No.            |
|--|---------------------------------|-----------------------|
| Roasted Molybdenite Concentrate (tech oxide) | Sadaci NV                       | 289-178-0             |
| Molybdenum Trioxide (pure)                   | Climax Molybdenum BV            | 215-204-7             |
| Molybdenum Metal                             | Plansee Metall GmbH             | 231-107-2             |
| Sodium Molybdate                             | Climax Molybdenum BV            | 231-551-7             |
| Ammonium Dimolybdate                         | Climax Molybdenum BV            | 248-517-2             |
| Ammonium Heptamolybdate                      | Climax Molybdenum BV            | 234-722-4 & 234-320-9 |
| Ammonium Octamolybdate                       | Climax Molybdenum BV            | 235-650-6             |
| Ferromolybdenum Slags                        | Sadaci NV                       | 282-217-2             |
| Molybdenum Dioxide                           | Chemimetall AG                  | 242-637-9             |
| Calcium Molybdate                            | 5NPlus Belgium                  | 232-192-9             |
| Iron Molybdate                               | Süd-Chemie Catalysts Italia srl | 237-389-3             |
| Chemically-produced Molybdenum Disulfide     | Grace GmbH                      | 235-721-1             |

All the Lead Registrants in this table were nominated and elected by each respective Substance Information Exchange Forum (SIEF). Ferromolybdenum is covered under REACH by separate registrations for Mo and Fe.

#### Online library of studies

We have compiled an Online Library containing around 140 physico-chemical, human health and environment studies and reports that were commissioned to generate high-quality data for risk assessing our eleven MoCon substances. The library is available exclusively to MoCon members via the 'Members Only' section of the MoCon website. All documents are viewable and/or downloadable so that members can add them to their own corporate reference databases.

#### Molybdenum risk assessment in arable and grazing soils

A key project overseen by the Technical Working Group was an update of the EU-wide regional risk assessment for molybdenum in arable and grazing soils. This update to the environment section of the technical dossier uses actual measured data now available from the GEMAS (Geochemical Mapping of Agricultural and Grazing Soils) program, instead of earlier modelled data, thereby rendering it the most accurate regional



assessment that is possible to conduct. The risk assessment outcome was 'no regional risk' observed from molybdenum to the terrestrial ecosystem.

### **Molybdenum disulfide REACH-registration dossier**

The Technical Working Group began developing a REACH-registration dossier for molybdenum disulfide ( $\text{MoS}_2$ ) that is chemically-produced during the activation or so-called pre-sulfiding of refining and petrochemical catalysts. This chemically-produced  $\text{MoS}_2$ , which is a component of catalysts used in oil-refining processes, requires REACH-registration whereas the naturally-occurring  $\text{MoS}_2$  in the mining and metals industries is exempt from registration (REACH Annex V). This is a very important REACH distinction between the two sources of  $\text{MoS}_2$ . A MoCon member from the chemical sector has been appointed Lead Registrant, and non-MoCon companies needing to register chemically-produced  $\text{MoS}_2$  will be able to purchase a MoCon 'Letter of Access' from MoCon to submit their co-registration dossiers for the next upcoming REACH-registration deadline of May 2013. A new MoCon webpage with all details on this latest dossier is available at <http://bit.ly/QzqBcc>

### **Speaking engagements**

MoCon has gained a reputation in the REACH community as a Consortium with efficient and effective Substance Information Exchange Forum management communications and dossier building know-how. As a result, the MoCon Secretariat accepted two invitations from the European Chemicals Agency (ECHA) to speak at the following conferences:

- In Brussels, September 2011: 'REACH Registration – What did we achieve in 2010 and how to ease the way for 2013?', which is available to view online at <http://bit.ly/qRT3Xs>

- In Finland, February 2012: 'Lead Registrant Workshop', which can be viewed online at <http://bit.ly/AvlbW2>

A third speech was given in Bratislava during April 2012, at a REACH Conference hosted by the Slovakian Ministry of Economy.

### **Sharing risk assessment data**

One of the core aims of REACH is to make data on the risk assessment of chemicals (including metals) more publicly available. This is to facilitate their safer handling and management, through better awareness of hazards and the use of effective risk management practices. In line with this objective, the majority of content of all Lead Registrant submitted



meets twice a year to progress technical issues in preparation for submitting technical dossier updates. These are necessary to ensure the substance risk assessments remain 'living documents', incorporating relevant new knowledge.

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## **The 140 physico-chemical, human health and environment studies commissioned as part of the REACH process have been compiled into an online library available to MoCon members**

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dossiers (including MoCon's) are available from the European Chemicals Agency at <http://bit.ly/GlbNGi>

The next step in the REACH process after Registration is Evaluation. ECHA and the EU member state authorities are embarking upon a program to scrutinize the technical content of Lead Registrant dossiers, and have compiled a list of 90 substances that appear on the CoRAP (Community Rolling Action Plan) list for evaluation during 2012–2014. No MoCon substances are on the list.

### **Ongoing registrant support**

Throughout last year, the MoCon Secretariat continued to support member co-registrants with preparing and submitting their REACH registrations. Likewise, the MoCon Technical Working Group

### **IMO A HSE committee**

IMO A's HSE activities that are not linked to REACH continue to progress as the Association furthers its strenuous efforts in the three key areas of Research, Regulatory Activity and Communication.

Protecting human health is paramount, and we pursue a continuous improvement strategy to enhance our knowledge and understanding about the toxicokinetics and toxicology of molybdenum through focused research programs. Part of this effort was a project completed in 2011 to create an IMO A database containing human bio-monitoring data available in existing literature. This is essential groundwork to facilitate data analysis to enhance the value of health screening and monitoring activities.







## Regulatory activity

Regulatory activities over the past year included engaging in technical dialogue on issues in:

### Germany

The authorities are considering the introduction of a maximum permissible limit for molybdenum in groundwater of 25 µg Mo/l. We have submitted scientific data and the discussion of an appropriate limit value is ongoing.

### The Netherlands

In early 2011, the Dutch Expert Committee on Occupational Safety (DECOS) made a proposal to classify sodium molybdate (and all molybdates) as a reproductive toxicant. Research that became available towards the end of that year does not support such a hazard classification and we submitted this to DECOS for their consideration and evaluation.

### USA

Molybdenum is currently on the Candidate List as a contaminant for potential regulation in drinking water. Consequently, the US Environmental Protection Agency (US EPA) will conduct Mo sampling in drinking water across the States during 2013–2015. There are also ongoing regulatory initiatives related to water quality criteria for groundwater and surface water for the protection of human health and aquatic life.

In September 2011, we met with representatives from the Office of Water at the US Environmental Protection Agency in the context of these initiatives. We highlighted the wealth of rigorous ecotoxicological data available from MoCon to assist in the process of determining safe concentrations of Mo in freshwater for aquatic life. We also identified studies and other research which may enhance data robustness when calculating Mo limit values in water for the protection of human health.

## Communications

The HSE Committee has developed a template Information Sheet for molybdenite concentrates, for members to customize according to the characterization of their concentrates. The Globally Harmonized System for the Classification and Labelling of Chemicals (GHS) is increasingly being adopted into legislation around the world, most recently in the USA in March 2012. It requires hazard evaluation of all chemical substances. IMO's template is a basis to facilitate supply chain communication of the hazard status of individual moly concentrates.

In July 2011, we participated as speaker and poster presenter at the 'International Conference on Biogeochemistry of Trace Elements' (ICOBTE) in Florence, Italy. Our topic was 'Risk Assessment of Molybdenum in the Aquatic Environment'. Conference participation is part of the strategy to proactively disseminate IMO's ecotoxicological dataset to the scientific and regulatory communities, and to maximise opportunities for our scientifically robust data to be widely referred to and utilised.

Over the last year, we have scrutinized several drafts of a report by the United Nations Environment Program on the impact of the mining industry to the environment, providing feedback to ensure accuracy of commentary about the ecotoxicology of molybdenum and lifecycle aspects. Such scrutiny is necessary because these reports are widely disseminated for use by UN Member States, NGOs, and other bodies when crafting policies in areas such as sustainable mining.

Starting in the first quarter of 2012, we introduced the 'Asia Regulatory Review', to complement our 'Americas Regulatory Review', established in 2006. There is a

significant surge in emerging legislation on chemicals management in Asian countries. The Review aims to signpost these developments to IMO's members to create awareness about existing and future compliance requirements. The Review is a multi-metal initiative, coordinated by IMO, and jointly funded by the Co, Cu, Mn, Mo, Ni, Pb, Sb, Zn and precious metals trade associations.

We introduced a new "Moly News – HSE Alert" bulletin, intended as an early alert on issues of interest to the broad IMO membership. The first edition focused on the recent adoption of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) by the USA.



All IMO HSE activities are managed and driven forward by the corporate representative members of the IMO HSE Committee, its HSE Executive staff member and its consultants, to whom we express our sincere gratitude for their dedication and professionalism.



# Market Development



Dr. Nicole Kinsman  
IMOA Technical Director



**IMOA's Market Development team promotes the benefits of using molybdenum through workshops, seminars, conference participation and one-on-one meetings. We produce brochures, case studies and feature articles for industry publications. We also contribute funding to joint industry research projects to improve our understanding of molybdenum's properties and how it enhances the performance of other materials.**



# Market Development

## Key activities and achievements in 2011/2012

### Carbon steels

IMO's engagement with the carbon steel industry continues to grow. Research programs, presentations, conferences, workshops and direct metallurgical consulting to steel mills and foundries are succeeding in raising awareness of molybdenum in this important sector.

The global interest in high strength steels for truck frames is a significant development. By increasing the strength of steels to at least 500 MPa, the weight of a truck is reduced and its fuel efficiency is increased. A steel mill in China has begun production of a moly-containing grade which has been identified as superior to competitor steels in initial production trials. We are now working

on similar concepts with other major Chinese and Brazilian steel producers and are in touch with some of the biggest truck manufacturers in the world to promote the benefits.

During the year, we conducted a survey on Mo alloying in DP (dual-phase) steel for automotive applications, revealing that 40–50 percent of the DP600 steel produced in Europe is Mo alloyed, with an even higher proportion in the US. Molybdenum alloying is also beneficial for the increasingly popular DP780. IMO has compiled supporting data to explain the advantages of molybdenum alloying and is currently in a trial phase with steelmakers in Europe and China. In China, IMO supports production of DP steels by assisting mills with



problem solving and in the design of other multiphase steels currently under development.

Martensitic steel, particularly hot stamping steel, is another important market for molybdenum. Hot stamping steel is usually microalloyed with boron to achieve sufficient hardenability. We are in discussion with all the major steelmakers to promote the advantages of using molybdenum, which has a different metallurgy and brings useful additional properties to the final product. Several producers are now trialling Mo-alloyed versions.

Engineering steel, particularly gear steel, has also been a focus for development this year. Chinese truck manufacturers require better gear performance as they intend to increase warranty periods.





We have been able to demonstrate the superior performance of moly-alloyed case carburizing steels based on the results of a recent research project.

### Research projects

We conduct and sponsor research to evaluate the beneficial effects of molybdenum in grades and applications where it has more potential or is not presently used. A joint project with Salzgitter-Mannesmann on heavy plate steel for arctic pipelines is being finalized. The preliminary results of this study demonstrate that the addition of 0.1% Mo has clear benefits over the previous moly-free steel.

A project on the improvement of gear steels with FZG (Forschungsstelle für Zahnräder und Getriebebau, Munich) and Buderus is still active. Results so far indicate that the alloy with increased Mo content has improved fatigue resistance under gear root bending conditions, giving better performance without an increase in cost.

A third project with the China Iron and Steel Research Institute (CISRI) has already produced spectacular results in an industrial trial at Laiwu Steel. They were able to produce ultra-high strength (1000 MPa) bainitic plate with a gauge of up to 25 mm. The developed alloy uses a low-C Mo-Nb-B concept with approximately 0.2% Mo.

### Dissemination

The 'Fundamentals and Applications of Mo and Nb alloying in high performance steels' seminar, organised by IMO A, CBMM and other partners was held last November in Taiwan. Over one-and-a-half days, leading academic and steel company researchers discussed the unique effects of molybdenum in pipe steel, structural steel and automotive steel. The proceedings of the seminar are now in print. Together with CBMM, we are organising a similar seminar in South

Korea in April 2013 with the support of POSCO and the Korean Institute of Metals.

Our consultants regularly deliver presentations on molybdenum at conferences and symposia, lead discussions at in-house seminars and undertake site visits with steelmakers. Last year, more than 40 such market development opportunities were identified and delivered.

A paper has also been prepared for the new 'Advances in Manufacturing' journal, edited by two highly recognized scientists at Shanghai University. The paper, entitled 'Reverse metallurgical engineering towards sustainable manufacturing using Nb and Mo alloyed high performance steels', explains how molybdenum contributes to sustainable solutions in vehicle manufacturing. The same paper was invited as a plenary presentation at the '7<sup>th</sup> International Conference on Advanced Material Processing' held in Taipei, Taiwan in June 2012.

## Stainless steel in ABC

Our market development activities for the architectural, building and construction (ABC) market include workshops, magazine articles, website resources, literature development, targeted mailings and project specific technical support. The majority of workshops and magazine articles are co-sponsored by the Nickel Institute.

Four feature articles and one short article reached about 125,500 readers from the ABC industry in three North American and two international publications. Of these, two were new feature articles on the specification of stainless steel in severe environments and in bioclimatic façades. The bioclimatic façade article was printed in Construct Canada in the Fall of 2011 and was reproduced in Stainless Steel Focus, Construction Specifier and Moly Review in 2012. A revised version of the bioclimatic façade article has been provided to the Indian Stainless Steel Development Association and the

**Downloads from IMO A's website have more than tripled in three years, while unique visitors have increased to around 12,000 per month.**



Nickel Institute in China. We will be submitting a new feature article on pedestrian bridges to Construction Specifier in 2012.

We have updated the website content to include several articles translated into Chinese, new applications, a new section on coastal salt exposure, and other content additions. New sections on fabrication and structural applications are under development. A targeted North American postcard mailing promoting the new website resources reached about 3,400 architects, specifiers and fabricators.



More than a thousand decision makers attended workshops in North America and China. The market development team also gave a presentation at the Annual General meeting of Swiss Inox, the Swiss stainless steel development association, in April 2012.

## Duplex stainless steel communication

The annual number of duplex brochure downloads in all languages from the IMOA website tripled to nearly 40,000 over the last year. Downloads reached 4,000 per month recently, compared to an average of 1,000 up to mid 2011.

English version downloads varied between 1,500 and 3,000 per month in the last year, with the Japanese and French versions achieving 700 and 1000 downloads respectively in June 2012. Besides demonstrating the popularity of this brochure worldwide, the increase in downloads saves a significant amount in printing costs. The brochure is now available in seven languages, with the

publication of a Spanish version at the end of June 2012.

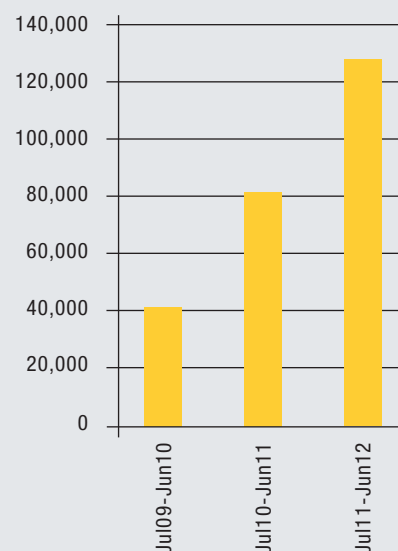
We co-organized a symposium at the 'NACE Corrosion 2012' conference in Salt Lake City, USA in March 2012 on 'Applications of Austenitic, Ferritic and Duplex Stainless Steels' and continued to chair the highly attended NACE technical exchange group TEG 114X on duplex and ferritic stainless steels.

## IMOA website

The number of unique visitors has increased from around 10,000 to 12,000 per month since last year. Total downloads have increased significantly from 40,000 two years ago to more than 120,000 over the last year. Six of the top 10 downloads are on duplex stainless steels.

We have seen a significant increase in users who subscribe to an IMOA "account". Here they can select and manage the information they receive from IMOA such as email notifications about

Total public downloads



'Moly Review', 'Moly News' or new IMOA literature.

## Closer collaboration in China

Collaboration in China has progressed during the year. Our work includes two research projects with CISRI: one on alloy steels, mentioned above and one on ferritic stainless steels for architectural applications. We are also co-sponsoring seminars on ABC and chemical/pharmaceutical applications with the Nickel Institute in Beijing. In November 2011, we gave a presentation on the selection of architectural and structural stainless steel at the 'Applications of Stainless Steel in Construction Conference' in Guangzhou. In June 2012, we attended the 'International Conference on Advanced Materials Processing' in Taipei.

We will also be participating in the 'Asia Steel International' Conference in Beijing in September 2012; supporting a seminar on ferritic stainless steels in Taiwan, also in September 2012; and supporting

Number of unique monthly visitors to the IMOA website







the China Stainless Steel Council (CSSC) Duplex Conference in Beijing in November 2012.

### A greater focus on research

IMO A conducts and sponsors research to evaluate the beneficial effects of molybdenum in grades or applications where it is not presently used or where it could be increased. In addition to those projects already listed, we are undertaking three new alloy steel projects in 2012 and a new stainless steel project examining atmospheric corrosion on stainless steels in Kuwait with the Kuwait Institute for Scientific Research.

A stainless steel project with Ugitech and the University of Grenoble, investigating the effects of molybdenum on the corrosion resistance of stainless steels in alkaline environments, was completed in April 2012. It showed that

molybdenum has a positive effect on corrosion resistance in ferritic and duplex stainless steels but no effect in austenitic stainless steels.

Two new market research studies are being finalized during 2012. The first is an update of the Yale 'stocks and flows' analysis, in conjunction with Team Stainless, with a separate analysis of molybdenum-containing stainless steels where possible. The second has just been released and is a study of molybdenum scrap being undertaken by SMR, a leading steel market research company.

### Team Stainless

IMO A is a member of Team Stainless, which actively promotes stainless steel. One focus area is structural applications. The group sponsored a well-attended stainless steel session at the 'International Symposium on Steel Structures'

in Seoul, Korea in November 2011. This year, Team Stainless will co-fund the 4<sup>th</sup> International Experts Seminar at the 'Stainless Steel in Structural Applications' conference in Ascot, UK, in December. The Team is also contributing to the American Institute of Steel Construction's (AISC) 'Design Guide 30: Structural Stainless Steel in the US', to be published in early 2013.

Team Stainless maintains a website, [www.stainlessconstruction.com](http://www.stainlessconstruction.com), where a large amount of information is available to designers, engineers and architects.

We are celebrating a century since stainless steel was first discovered and commercialized. To mark the occasion, we have developed a travelling exhibition which covers the history of the stainless steel industry, its many applications, alloying elements and its recycling and environmental footprint.



# Financial Report 2011

## Income and expenditure account

For the year ended 31 December 2011

### IMOA/Molybdenum Consortium

|   | 2011<br>\$ | 2010<br>\$ |
|---|------------|------------|
| <b>Turnover</b>   | 2,824,462  | 3,416,419  |
| Operating and administrative expenses                           | 3,008,738  | 3,681,962  |
| <b>Operating surplus/(deficit)</b>                              | (184,276)  | (265,543)  |
| Other interest receivable and similar income                    | 9,709      | 3,791      |
| <b>Surplus/(deficit) on ordinary activities before taxation</b> | (174,567)  | (261,752)  |
| Tax on surplus/(deficit) on ordinary activities                 | 1,456      | 568        |
| <b>Surplus/(deficit) on ordinary activities after taxation</b>  | (176,023)  | (262,320)  |



# Balance sheet

For the year ended 31 December 2011

## IMO A/Molybdenum Consortium

|  | 2011<br>\$ | \$        | 2010<br>\$  | \$        |
|--|------------|-----------|-------------|-----------|
| <b>Fixed assets</b>                                    |            |           |             |           |
| Tangible assets  |            | 29,849    |             | 23,206    |
| <b>Current assets</b>                                  |            |           |             |           |
| Debtors  | 74,288     |           | 54,834      |           |
| Cash at bank and in hand                               | 5,221,144  |           | 5,720,327   |           |
|  | 5,295,432  |           | 5,775,161   |           |
| <b>Creditors – amounts falling due within one year</b> | (963,685)  |           | (1,260,748) |           |
| <b>Net current assets</b>                              |            | 4,331,747 |             | 4,514,413 |
| <b>Total assets less current liabilities</b>           |            | 4,361,596 |             | 4,537,619 |
| <b>Reserves</b>  |            |           |             |           |
| Profit and loss account                                |            | 4,361,596 |             | 4,537,619 |
| <b>Accumulated funds</b>                               |            | 4,361,596 |             | 4,537,619 |

## Financial Commentary

The 2011 audited accounts presented here are consolidated figures for IMO A and the Molybdenum Consortium and are subject to approval at the 2012 AGM. Income from subscriptions and levies amounted to US\$2,824,462. Expenses of US\$3,008,738 resulted in a drawdown of US\$176,023 from the accumulated funds, after adjustments for bank interest and tax. Expenditure within the Molybdenum Consortium continued on vital projects in 2011 and was met, as planned, from its reserves.

The combined accumulated funds at the year-end were US\$4,361,596. Of this US\$2,997,900 were attributable to IMO A and US\$1,363,696 to the Consortium. In the case of IMO A, the year-end balance was consistent with the Executive Committee's policy of maintaining a buffer approximately equal to one year's expenditure. This mitigates the effect of fluctuating income and ensures that the obligations of the Association can be met. A significant percentage of the Molybdenum Consortium's reserves at the end of 2011 were committed to expenditure in 2012.



**International Molybdenum Association**

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Molybdenum Consortium website: [www.molybdenumconsortium.org](http://www.molybdenumconsortium.org)