

# FEM REPORT 2006-2008



**Federation of  
European Materials Handling**



## MESSAGE FROM THE PRESIDENT

I took over the FEM Presidency at the 31<sup>st</sup> FEM Congress in Tampere in 2006, after occupying the Vice-Presidency for 2 years and participating in FEM activities for many years. The period 2006-2008 has been essentially marked by the willingness to continuously improve our industry's image and representativeness in Europe.

All FEM Product Groups and their members are busier every year in encouraging technical progress,

safety at work and sustainable development. Together with national associations, they have reinforced the representation of our industry towards the European institutions in defending its interests on issues directly affecting our businesses such as the New Machinery Directive and the Outdoor Noise Directive. In September 2007, FEM was present at the Orgalime and European Sector Associations' Presidents Board meeting which aims to act as a platform for the engineering industries and discuss common issues with high level officials. This meeting was held with Commissioner for Trade Peter Mandelson, and FEM took this opportunity to voice its concerns notably on the availability and price of steel, and its impact on our sector.

Following the 2006 Congress and the approval of the General Assembly, the Turkish Association for Material Handling, Forklift and Storage Equipment (ISDER) joined FEM as an ordinary member. The Port Equipment Manufacturers Association (PEMA) also joined FEM as an associate member. Both have reinforced FEM ranks and actively contributed to its objectives and benefited from its works.

The FEM Intralogistic Systems Product Group was created after the merger of the former Integrated Systems, Motor Driven Storage Equipment and Unit Load Conveyors Groups, and it continues to expand.

Support for the major European exhibitions continues, and FEM was pleased to endorse the CeMAT exhibition in Hannover in May 2008 for the second time. FEM had its own booth

in the fairground, and it was a unique opportunity to inform visitors on its activities, objectives and structures. Particular interest was shown in Product Group work and membership conditions. FEM will pursue its promotional relations with exhibitions in the future.

A CEO breakfast was organised for FEM companies present at CeMAT 2008, and discussions concentrated on the economic trends and perspectives in European Mechanical Engineering, with a particular look at intralogistics. FEM was pleased with the success of the event which attracted more than 50 attendees.

The signature of the cooperation agreement with our US counterpart Material Handling Industry of America in 2006 has now developed into systematic exchange of information and regular contacts between the respective central administrations. We hope this cooperation will continue and develop into active participation in common projects on technical rules and economic reports in the coming years.

FEM will take stock of its recent accomplishments during its 32<sup>nd</sup> Congress in Cannes, and will look ahead to the next two years and beyond as there is still much to be done. Our sector, like other mechanical branches and the engineering industries at large, is faced with global challenges that affect its core base - access to and prices of raw materials, increased regulatory framework, pressing environmental concerns and their integration into technology, the global market and the challenge of emerging economies... While EU manufacturing has gained in image and growth in the past few years, while the order books are filling in our companies, it has become increasingly difficult to find skilled people to respond to the demand, or simply to maintain production capacity. FEM industries will have to address these matters, and will have to keep the initiative, leadership and expertise in technical rules and standardisation procedures in order to preserve their innovation capacity and industrial base in Europe, and develop competitiveness worldwide.

Ambrogio Bollini  
FEM President

## MESSAGE FROM THE SECRETARY GENERAL

Since 2007, the FEM General Secretariat has been given priorities in a yearly work programme discussed and agreed by the Executive Committee and Board of FEM. This allows the secretariat to respond to the needs of the association and its members, while adapting to a moving European agenda for communication and representation purposes.

High on the agenda are the European directives and legislative developments affecting FEM. Since the creation of the Task Force on EU Directives in 2006, the General Secretariat has assisted its activities and expansion into specialised task forces, mainly the Task Force on Machinery and the Task Force on Outdoor Noise. The Task Force is a flexible structure which

allows Product Group and National Committee representatives, and manufacturers to meet and discuss EU legislative matters and, where necessary, agree on a position and lobbying strategy. A topical activity is the work undertaken by the FEM Task Force Machinery to prepare and lobby contributions to the European Commission interpretative guidelines on the New Machinery Directive 2006/42/EC. Early in 2008, a specific Task force dedicated to Directive 2005/32/EC on Eco Design of Energy Using Products was convened to trigger the interest of the Product Groups and manufacturers towards growing energy efficiency demands, as the EU legislator currently explores all possible ways to save energy and mitigate climate change.

The Task Force activities will certainly continue to expand in the near future, notably with the upcoming review of the Outdoor Noise Directive 2000/14/EC.

In 2007, FEM developed a new website where all the basic information on its mission, objectives, structures, activities and publications can be easily accessed. Each FEM Product Group has a dedicated page on which it is invited to explain its structures and activities, thereby communicating with their current and potential members, as well as the general public. The website is also meant to be a living tool and offers a news page which can be regularly updated with the latest happenings in the FEM groups, an FEM event page and an exhibition calendar. A Members Area has been developed to facilitate and centralise the exchange of "live documents".

The FEM General Secretariat organised and was present at the FEM booth during CeMAT2008 in Hanover, and a partnership agreement with the fair organiser was concluded, including various communication activities beneficial to both parties. The FEM Executive Committee and Board met at CeMAT,

and a CEO breakfast was organised which gathered EU company leaders and members of FEM for networking opportunities. This project was a success in visibility and communication terms, and will most certainly be repeated in 3 years' time.

More generally, the General Secretariat has provided support to the President, Board, Executive Committee and Task Forces, and has supervised the accounts and finances. It continues to monitor EU legislative developments and represent FEM towards the institutions and other industry sectors.



Stéphanie Uny  
FEM Secretary General

## FEM LEGISLATIVE TASK FORCES



The Task Force on "EU Directives" created in 2006 ensures a regular review of the various pieces of legislation which concern more than one FEM PG, such as the WEEE/RoHS, engine emissions, physical agents, and EcoDesign Directives, or the revision of the New Approach. A first major result of its work was the publication in September 2006 of a position paper explaining the reasons

why FEM products are out of the scope of the WEEE directive. This document is available on the FEM website.

Two new task forces dedicated to particular directives have been set up and a chairman mandated for each of them:

- The FEM Task Force on Machinery deals with the new Directive 2006/42/EC to be implemented at the end of 2009. The European Commission is preparing official guidelines interpreting the new directive and aiming at facilitating its implementation by EU Member States and manufacturers. In particular, it will attempt to clarify market surveillance rules and the new technical requirements on marking, fixed guard, fitness for purpose (which request test on every single lifting machine). The document is being discussed within an editorial group composed of public authorities, notified bodies and industry representatives. The FEM Task Force, itself composed of PG representatives and manufacturers, regularly contributes to the work on these guidelines to ensure that they reflect the interests of its industry.
- The FEM Task Force on Outdoor Noise deals with Directive 2000/14/EC. Evaluation of the application of the directive was subcontracted to a consortium of notified bodies in 2007 in order to collect information and draft a report for

submission to Parliament and Council. The FEM Task Force answered the enquiry conducted by the consortium. Once the consortium's "NOMEVAL report" was presented at the end of 2007, the FEM Task Force provided comments to correct various misinterpretations in the report, and to state its position on conclusions which were unsatisfactory for our industries. A revision of the directive is now being prepared on the basis of this report and further industry consultation and comments. An impact assessment started in June 2008 and should be completed by December 2008. It is now a critical time for FEM to contribute to this impact assessment through its PGs, and through coordination at the level of the Task Force. 2009 will be dedicated to the negotiation and lobbying on the Commission proposal for a revised directive.

- Concerning the Engine Exhaust Emission Directive 2004/26/EC, the technical feasibility of the next stages for reduction of exhaust emissions has been evaluated and a timetable has been introduced in the directive. Flexibility to go from one stage to the next is very tight and should be revised. In addition, inclusion of a "Portable Emissions Measurement System" on the machines to measure emissions in-use is being considered. The directive is subject to a technical review and, based on its results, a revision will be prepared by the Commission. As a first step, an impact assessment started in June 2008 and should be completed by December 2008. Here again, FEM must contribute to this impact assessment using experts from the concerned PGs, and shape its possible strategy for 2009 when the Commission proposal for revision will be on the table. More FEM participation on this subject is sought, in particular because the noise and emissions directives are closely linked.

Cosette Dussauey  
Chairperson FEM Task Force on EU Directives



## BULK MATERIALS CONVEYORS

The Bulk Materials Conveyors Product Group covers a wide range of different kinds of bulk materials conveyors: Belt, apron, screw, vibrating scraper and "en masse" conveyors, bucket elevators; Storage equipment for bulk materials, e.g. stackers and reclaimers, silos, hoppers, bunkers, feeders; Ship loading and unloading systems; Loose bulk sorting equipment; Pneumatic handling equipment for bulk materials.

The Product Group has been dormant during the period 2006-2008. For the moment it has no members, and performs only routine work: printing and distribution of existing FEM documents; creation of the Group's website page. The Product Group used to monitor standards work for con-

tinuous conveyors undertaken in CEN TC 148 and ISO TC 101. Neither Technical Committee is currently active.

The Product Group is ready to start activities very quickly if manufacturers of bulk handling conveyors show interest in specific issues which should be dealt with at a European level.



Armin Weih  
PG Secretary

## CRANE AND LIFTING EQUIPMENT

The Cranes and Lifting Equipment Product Group (PG CLE) founded in 2004 after the merger of former Section I (Heavy Lifting and Handling Equipment), Section V (Mobile Cranes), and Section IX (Series Lifting Equipment) represents the interests of manufacturers of Lifting Equipment (EOT) & Hoisting Equipment, Tower & Harbour Cranes and Mobile Cranes, and is sub-divided into three corresponding subgroups.

The Lifting Equipment (EOT) & Hoisting Equipment subgroup, with members from Germany, Finland, France, Italy, Spain and Switzerland, works on five main items:

- Statistics on European market incorporating an interface with USA market (MHIA).
- Maintain FEM document series following particular progress in CEN/TC 147 – Cranes – Safety and ISO/TC 96 – Cranes.
- Follow the work of CEN Workshop 25 – Lifting and load-bearing equipment for stages and other production areas within the entertainment industry in CEN.
- Elaborate a document on light cranes.
- Monitor the work of CEN, IEC and ISO.

The Tower & Harbour Cranes subgroup with members from Germany, France, Spain and Italy has two sections. The first deals with the development of CEN & ISO standards: EN14430 Cranes - Tower Cranes and climbing frames; amendment to EN13001-2 initiated by FEM. It also monitors the work of CEN/TC 147 WG P2 and ISO/TC 96 SC7 concerning scope of products, and maintains liaison with the Committee for European Construction Equipment (CECE) to exchange ideas and pursue common technical and economic goals. The second section is a specialist calculation group working on EN14439 "Cranes – Tower cranes". Its goal is to prepare a proposal for the revision of EN14439 on the basis of EN13001 standards published in September 2004.

The subgroup Mobile Cranes with members from Germany,

France, Spain and Italy has two sections. The first deals with technical aspects, e.g. FEM work on the Machinery Directive 2006/42/EC, monitors and gives expertise on the Work at Temporary Work at Height Directive 2001/45/EC, Vibration Directive 2002/44/EC or Engine Exhaust Emission Directive 97/68/EC.

The annual International Cranes Technical Liaison Meeting, in which PG CLE participates, allows exchanges on e.g. legislative developments in EU, Japan and the USA.

In 2008 this subgroup Mobile Cranes liaised with E.T.R.T.O - The European Type and Rim Technical Organisation - in order to be proactive and react to the STGO regulation.

PG CLE strongly supports the process to find a mutual agreement with EU authorities on EN13000 Crane-Mobile Cranes (safeguard clause regarding Rated Capacity Limiter) reached in early 2008. The new target is "one standard – one test – accepted worldwide".

The second section of this Group deals with economic matters (e.g. worldwide mobile crane statistics compiled with counterpart associations in the USA and Japan).

At the moment 27 FEM documents are available and some are partly incorporated or quoted in EN standards, which means that they are harmonised documents.



Anton Grob  
PG President



Klaus Pokorny  
PG Secretary

## ELEVATING EQUIPMENT

The Elevating Equipment Product Group (EE PG) was formed at the 2004 Congress and has since met a further 10 times in Brussels, London, Berlin, Birmingham, Paris and Tampere. It has the following objectives:

- Promoting and encouraging free communication, discussion and exchange of views between members and users of the products on all matters relating to the design, manufacture, supply and service of the products covered.
- Promoting policy amongst the members and between FEM EE PG and any governmental bodies and associations directly or indirectly affecting the design, manufacture, supply and service of products covered.
- Safeguarding the interests of the industry, particularly on economic, technical and legislation matters.
- Encouraging technical progress and safety in the field of the products.
- Harmonisation of legislation, standardisation and testing procedures at international and EU levels to facilitate free trade.
- Assisting and advising relevant authorities, at national and EU level, on matters concerning the products covered.

During the period 2006-2008, the Product Group work has included:

- Preparation and distribution of a document to show the benefits of using appropriate harmonised CEN standards to manufacturers and purchasers.
- Promoting the discussion of CEN standards, draft standards and proposed amendments between those manufacturers, from different EU Member States, that are not directly involved in the standardisation activities.
- Preparation and distribution of separate FEM guidance

documents on the Periodic Inspection of lift tables and dock levellers.

- Evaluation, discussion and input to FEM on guidance for the new Machinery Directive.
- Evaluation and discussion of other Directives and CEN and ISO documents.
- Monitoring proposals for new national regulations which would restrict the free movement of equipment.

At the CeMAT Fair in Hanover, the Product Group held a Briefing Session with the objective of informing and updating members and non-member companies of the important legislative and standards issues. Invitations were sent to some 100 manufacturers and we were pleased to attract 17 people to the session.

The applicable CEN standards are: EN1570: 1998 - Safety requirements for Lifting Tables; EN1398: 1997 - Safety requirements for Dock Levellers; EN1756-1: 2001 - Platform lifts for mounting on wheeled vehicles - Safety requirements - Part 1: Tail Lifts for goods; EN1756-2: 2004 - Platform lifts for mounting on wheeled vehicles - Safety requirements - Part 2: Tail Lifts for passengers



John Meale  
PG President



Tim Faithful  
PG Secretary

## INDUSTRIAL TRUCKS

On the technical level the Industrial Trucks Product Group represents its members' interests in the process of drafting the EU guidelines for the new Machinery Directive 2006/42/EC, and is proposing input for a further amendment to the Outdoor Noise directive 2000/14/EC.

Concerning floor requirements (floor flatness and floor levelness), the topic will be completed this year.

New topics in the Product Group include foot protection, load moment indicator and load moment control.

A procedure for developing FEM recommendations is currently underway to support especially the new members with their daily tasks.

The Product Group is very much involved in the European (CEN) and worldwide (ISO) standardisation of safety requirements for all kinds of industrial trucks. Several FEM member companies represent their national standardisation institutions at CEN and/or ISO level.

The new standing technical committee for rough terrain trucks has started its work. Major issues are road regulation, CE marking challenged by national authorities, suspended loads swinging freely, stability, visibility, working platforms and training of operators.

Regarding economic and statistics work, the Product Group has finalised the revision of the FEM IT statistics manual, which serves as a basis for the worldwide collection of monthly statistical data for order intake and quarterly statistical data for deliveries of industrial trucks. A huge effort has been made to ensure the accuracy of the imported data, and this is ongoing. The software has been improved and, more specifically, an early warning system for the monthly order intake statistics at company and FEM IT level has been implemented and is working very well. The Product Group is focusing on attracting more "big truck" manufacturers to participate in the collection of these statistics. Currently

only approximately 50% of these "big truck" manufacturers provide input in the various segments.

A new statistical tool has been developed using the NACE code to cover around 40 branches, and this will start in 2009.

At a worldwide level, the Product Group is running world industrial truck statistics (WITS) in cooperation with the associations of America (ITA), Brazil (ABIMAQ), China (CITA), Japan (JIVA) and Korea (KOCEMA). Regular meetings are taking place to discuss quality improvement of the monthly order intake and quarterly delivery data, especially to avoid double-counting. The WITS statistics are currently under revision.

At Board level, the Alliance welcomed a new national association at the end of 2007 - CITA (Chinese Industrial Truck

Association). The associations forming the Alliance (FEM IT, ITA, JIVA and CITA) meet once a year to exchange information of mutual interest (e.g. on economic, statistical or technical matters).



Gordon Riské  
PG President



Konrad Kasper  
PG Secretary



Sacha Schmel  
PG Secretary

## INTRALOGISTIC SYSTEMS

In October 2006, the former Integrated Systems, Motor Driven Storage Equipment and Unit Load Conveyors Product Groups merged into one single Product Group named "Intralogistic Systems". The decision to create a single FEM Intralogistic Systems Product Group was justified by the need to encourage synergies between the activities of the 3 groups which all dealt with integrated systems and warehouse automation, as well as the need to find optimum solutions to efficiently use the resources provided by their members.

The new Product Group aims to provide an international forum for its industry to debate technical and business matters; develop reliable market transparency on the basis of statistical data received from the participants; develop technical rules and guidelines at European level; define interface and communication standards in its business. The Product Group Plenary adopted operating rules in 2007, and its structure consists of a Plenary, a Board, a General and a Technical Secretariat, and Working Groups. The General Secretariat is managed by Orgalime while the Technical Secretariat is managed by VDMA. The PG members are companies which are members of FEM National Committees.

Over the past 2 years, the working group on RAM (Reliability - Availability - Maintainability) has continued to collect knowledge of the industry and research institutes to calculate availability values in the planning phase. An interim report will be published in the autumn of 2008 to assess the

results and future developments.

The Product Group has also conducted the Revision of FEM Guidelines 9.831 on the calculation principles of storage and retrieval machines - tolerances, deformations and clearances in the high-bay warehouse. Parts on clearances, deformation and tolerances for single and double deep rack types will be published in 2008, and a separate document on interfaces will continue to be developed.

Early in 2008, decision was taken not to pursue the project on FEM recommendations for software architecture (SAIL model) as there was no evident interest to be active on this issue for the PG members.

Finally, the PG pursues yearly statistical exercises on S/R machines and intralogistic systems projects. In 2006, the total number of projects reached 214, ranging from €0.5 million to €20 million



Jan van der Velden  
PG President



Stéphanie Uny  
PG Secretary General

## MOBILE ELEVATING WORK PLATFORMS

The MEWPs Product Group covers all types of Mobile Elevating Work Platforms, e.g. scissor and self-propelled booms lifts, vehicle mounted platforms, trailer push-around, vertical personnel platforms, insulated aerial devices.

The applicable CEN and ISO standards are: EN280:2001

Mobile elevating work platforms - Design calculations - Stability criteria - Construction. Safety - Examinations and tests; ISO16368:2003 Mobile elevating work platforms - Design calculations, safety requirements, test methods; ISO/DIS18893 - Mobile elevating work platforms -

Safety requirements, inspection, maintenance, operation; ISO18878:2004 Mobile elevating work platforms - Operator (driver) training.

During the period of 2006-2008 the Product Group work has included:

- Studying accidents occurring with MEWPs to determine their causal factors and make recommendations. The Group also saw a need to formulate statistics regarding accidents involving work from height broken down into different categories e.g. cranes and telehandlers.
- Active participation in CEN/TC98/WG1 that is concerned with the revision of EN280. This standard covers the design examination and testing of MEWPs. Topics include deck extensions on scissor lifts, emergency lowering overload cut-out, chassis tilt, folding guard rails, work restraint anchorages, manual levelling of platforms, drop bars and scissor mechanism guarding requirements. The overriding theme throughout these discussions is how the draft requirements could be implemented on all MEWP types and the safety improvements that result from them on different product ranges.
- Monitoring of activities with regard to possible changes

to the Outdoor Noise Directive 2000/14/EC and proposals for guidance to assist duty holders and authorities to implement the new Machinery Directive 2006/42/EC.

- Exchange of market statistics. The Product Group has invited manufacturers to join the market statistics exchange and has received positive feedback. Communication has taken place with all of the major players within the industry who have shown initial interest in taking part.

Other activities of the Product Group include the use of harnesses in MEWPs, scrapping of old machines and development of a formal position on operator training.



Christian Lajous  
PG President



Giles Cuncell  
PG Secretary

## RACKING AND SHELVING

The Product Group met in plenary session in Tampere in 2006, Paris in 2007 and will meet in Cannes in 2008. Product Group Officers met in Shrewsbury (UK) and Milan in 2007 and the Technical Committee and various Working Groups have met in various locations in Europe over the past two years. Product Group President and Secretary General are Board members of FEM itself and have participated in Board and Executive Committee meetings over the past two years.

A major part of Product Group activity has been associated with the work of CEN, namely CEN TC344 "Steel Static Storage Systems". The Product Group provides the Chairmanship of the TC and its various working groups. There have been many meetings, which have culminated in the following Steel Static Storage Systems Standards being submitted to formal CEN voting procedure for adoption in 2008: prEN15512: Adjustable pallet racking systems – principles for structural design; prEN15620: Tolerances, deformations and clearances; prEN15629: The specification of storage equipment; prEN16535: The application and maintenance of storage systems.

A new CEN TC344 Working Group has been established to develop a Standard for "Terms and Definitions for Storage Equipment".

The Product Group's work on design considerations for racking under seismic conditions has continued in liaison with EU-funded university research into the subject and also the Rack Manufacturers Institute of the USA. The results of this work will enable the Product Group to publish

an amended version of its Seismic Design Guideline by the end of 2008.

Liaison with other Product Groups of FEM has been maintained particularly in regard to racking structure interfaces with industrial trucks and cranes.

New Product Group Work Items on FEM guidance documents for Drive-in Racking and Cantilever Racking have commenced. The subjects of training and general safety in relation to storage equipment was considered at a working group meeting in the Summer of 2008.

It is the intention of the Product Group to develop by early 2009 appropriate PR material to promote its on-going work at both a CEN and FEM level.

Finally any company not currently active in the work of the Product Group or indeed FEM itself is invited to make contact to ensure they are involved in the latest industry technological developments.



Tony Gresham Jones  
PG President



Brian Huxley  
PG Secretary



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## Associate Members

### PEMA

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