



FEM EUROPEAN MATERIALS HANDLING FEDERATION

REPORT

2016

2018



President's Report

I am passionate about the materials handling industry: versatile, complex, agile, innovative and overall fascinating. Yet, it is a silent hero whose societal contribution is too often ignored. Therefore, making our industry attractive was my very first objective and the thread of my term as President of FEM.

My first ambition was to reach out to those who will make our companies successful tomorrow: young talents. To this end, we set up what certainly is an innovative project for a trade association. We organised a student competition, the Smart Logistics Challenge. The idea was immediately met with enthusiasm within our network and several of our companies agreed to take part. We came up with exciting themes: co-botics, sharing economy and e-commerce. These are both relevant to our industry and stimulating for students.

Over a bit less than a year, we have engaged with a few hundreds of students, assessed innovative proposals, discussed with enthusiastic finalists and finally picked up 6 inventive winners. Throughout the project, FEM, its members and partner companies have worked hand in hand to ensure the widest possible outreach, thereby accomplishing our number-one objective: promoting our industry. I think we can be proud of the results achieved.

Our industry also needs to be attractive towards decision-makers, with whom we work on a daily basis. FEM is already an established and respected partner of the European Commission on many technical issues. We have thus focussed our efforts on a more political level and on forward-looking issues such as data, cybersecurity or artificial intelligence. We have then been able to engage with Members of the European Parliament and with high-level Commission officials, such as Vice President Andrus Ansip in charge of the Digital Single Market.

I would like to stress that many of these initiatives were carried out in close collaboration with Orgalime. Establishing stronger links with Orgalime was another of my objectives. We are now working together on most digital and industrial policy matters and FEM industrialists often feature at Orgalime events. This relationship is mutually profitable as Orgalime benefits from our expertise and practical experience whilst FEM can increase its visibility through Orgalime's wide political outreach.

Finally, I am pleased to have been able to extend our membership to Iran and I hope that recent geopolitical developments will not call this into question.

These two years were very dense and went very fast. I am proud of having moved FEM forward. This is the challenge of the years to come: making sure that FEM keeps pace with the exponential development that our industry is going through. As long as we remain open, alert and imaginative, I am confident this will be the case. I am also frustrated as time flies too quickly. But I will keep contributing to the future success of FEM!

Christophe Lautray
President

Secretary General's Report

Digitisation
Guidance
Outreach

The European materials handling industry has always demonstrated a remarkable ability to innovate. Digitisation has now become an essential innovation driver that creates better machines, new services and new business models. Our companies have generally embraced the digital revolution; some are even driving it.

Digitisation has equally made its way to FEM regulatory activities. In the past couple of years, we have been working on new issues, such as data, cybersecurity and artificial intelligence. This work requires different knowledge and methods. We have thus enlarged our pool of experts and set up a dedicated Task Force to reflect these new needs. We are also working on these various matters closely with Orgalime, not only by providing input but also by making our companies available to share their knowledge and experience with European decision-makers.

No doubt these activities will further develop in the years to come. The digital transformation is likely to not just influence our topics but also to profoundly change the way trade associations like FEM operate and communicate.

What will certainly remain in the digital era are the missions of FEM; among these, that of informing our industry about regulatory developments and explaining how to apply them. We have produced several guides (F-Gas Regulation, RED, NRMM) which are concrete tools that our companies can use to understand the legislation and how to comply with it.

Over the past years, we have sped up our communication efforts in order to maximise our outreach. This is a necessary complement to our usual technical and regulatory activities and one that ultimately reinforces FEM influence. We have started to build a community, not just internally but also on a more global level thanks to an increased presence in the social media and by making full use of our members and companies' networks. In doing so, we also attract more interest from the public. This is a key aspect to underline and showcase the societal value of our industry.

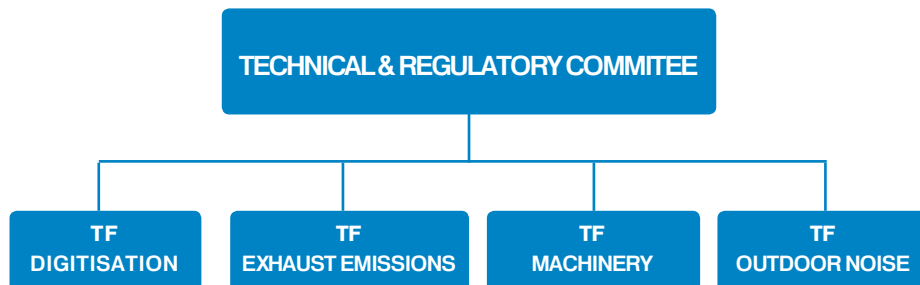
Olivier Janin
Secretary General



Legislative Report

1 – ORGANISATION

The FEM Task Forces on regulations are horizontal to all Product Groups. They define FEM positions and prepare lobbying actions towards the European institutions. Participation is open to all general members and Product Group members. Information is distributed to the National Committees and Product Group secretariats who circulate it to all their members.



2 – STRUCTURE & SCOPE

FEM has one general overarching working body (Technical & Regulatory Committee) and 4 specific Task Forces (NRMM, Noise, Machinery Directive and Digitisation).

Altogether, these working bodies tackle many topics:

- ▶ Safety of machines
- ▶ Outdoor noise
- ▶ Exhaust emissions of non-road mobile machinery
- ▶ Ecodesign
- ▶ Road circulation
- ▶ Chemicals legislation
- ▶ Fluorinated greenhouse gases
- ▶ Market surveillance

FEM collaborates with fellow trade organisations on issues of common interest. Such collaboration is particularly developed with CECE (construction machinery), CEMA (agricultural machinery),

EGMF (garden machinery) and Euromot (engines), as well as Orgalime. Common issues include exhaust emissions of non-road mobile machinery, outdoor noise, safety of machines, market surveillance and digitisation.

3 – MAIN ACTIONS DURING THE LAST TWO YEARS AND KEY POINTS FOR THE FUTURE

3.1 – Exhaust Emissions from Non-Road Mobile Machinery

FEM, together with CECE, CEMA, EGMF, EUnited Municipal Equipment and EUROMOT, developed a joint industry Frequency Asked Questions (FAQ) document on the new Regulation (EU) 2016/1628 on type-approval and emission limits for engines installed in non-road mobile machinery (revision of Directive 97/68/EC). This document, which is specifically aimed at providing guidance to the OEM on the main requirements and provisions in the Regulation, was finalised at the end of 2016 and published on the date of the official publication of the supplementary legislation (Delegated and Implementing Acts - DA and IA), i.e. 13 April 2017.

As the European Commission has detected a number of editorial errors to correct in the supplementing acts, the work on the amending acts is ongoing. The draft DA and IA have been issued with an open request for feedback by mid-March 2018. The Commission intends to have all supplementing acts adopted by June 2018.

In the meantime, the industry expert group that drafted the NRMM FAQ has been reactivated, in order to work on another common guidance document targeting market surveillance authorities (MSA). The overall goal is to assist the MSA by pointing to those requirements that are key for checking the compliance with the new Regulation of

engines in scope and machines in which these engines are installed. The objective is to have this document finalised before October 2018 so that it can be shared with the European Commission prior to the GEME meeting (scheduled on 17 October). In parallel to this exercise, the FAQ document is likely to be updated, in order to reflect the future references of the amending supplementing acts.

Key points for the future

- Continue cooperating with the other trade associations involved in view of drafting a joint guidance document for market surveillance authorities on Stage V emissions' legislation

3.2 – Machinery Directive

FEM was actively involved in the Technopolis study on the evaluation of the Machinery Directive (MD), both individually and as member of Orgalime. FEM issued a generic position paper making it clear that the MD is performing well and that a complete revision is therefore unnecessary. This position, largely shared in the industry, was reflected in the final report, which concludes that the Directive is relevant and appropriate in fulfilling its two key objectives (free movement of machinery, and a high level of safety for machinery users).

A point was however made on whether the MD was equipped to face new risks resulting from digital developments (e.g. robotics, artificial intelligence). This issue was notably largely discussed during a meeting with the new DG GROW Head of Unit C3 on Advanced Manufacturing in January 2018. The Commission made it clear that it needed arguments. Further to this meeting, FEM prepared a paper that provided detailed arguments in support of this position.

The Commission eventually sympathised with the industry position but decided to commission a future study on emerging technologies to assess any possible nega-

tive impact on safety arising from human-robot cooperation, and other aspects which are not explicitly tackled in the MD.

As regards the Guidelines on the application of the MD, the edition 2.1 was published in July 2017. Throughout 2017, FEM liaised with Orgalime on a regular basis to prepare the industry's input on the MD Guide. This version includes all the comments and proposals for improving and clarifying the Guide that were agreed in the Editorial Group (sub-group of the Machinery WG) and endorsed by the Machinery WG. Those comments which were tabled before this publication but are still pending approval will be re-analysed in future meetings of the Editorial Group, to be addressed in a future revision of the MD Guide.

FEM participated in all the Machinery WG meetings organised in the last two years (9-10 November 2016, 28-29 March 2017, 15 November 2017, 19-20 April 2018). Ahead of the November 2016 meeting, FEM tabled two position papers: on "industrial trucks and equipment for handling loads" and one on "fitting inter-changeable equipment on forklift trucks". Regarding the second paper, it is argued that the current procedure used for the coupling of interchangeable equipment to a forklift truck is well-established and continues to represent the safest means to define the actual capacity of a forklift truck equipped with an interchangeable equipment. As the general consensus on this issue reflects the FEM view, this agenda point will be removed from the agenda of the next Machinery WG meetings.

Key points for the future

- Monitor the Commission's intentions regarding a possible revision of the MD and the timeline of this revision
- Continue cooperating with Orgalime within the Machinery Core Group and liaise with other like-minded associations where interests converge



Eva Virtute
Technical & Regulatory
Committee Chair

- Continue participating in the Editorial Group and Machinery WG meetings and monitor issues of interest.

3.3 – Market Surveillance

FEM contributed in November 2017 to two consultations aimed at reviewing the current market surveillance framework, namely a public consultation on the Internal Market for Goods: compliance and enforcement, and also an Ernst & Young questionnaire on the review of the Regulation (EC) 768/2008. These consultations fed into the impact assessment process which preceded the European Commission proposal on compliance with and enforcement of EU harmonisation legislation, published on 19 December 2017.

This Commission proposal covers all industrial products which are subject to EU harmonised rules, complementing the Regulation (EC) 768/2008 on market surveillance and accreditation and Decision N° 768/2008, and amending market surveillance provisions in product-specific legislation (such as the directives on machinery, low voltage equipment, electromagnetic compatibility equipment, radio equipment etc.). The General Product Safety Directive will apply in addition to the future Regulation on compliance and enforcement.

FEM published a position paper generally welcoming the proposal and in particular the proposals around closer cooperation between market surveillance authorities and the industry. Designating a person responsible for compliance information, organising common activities and sharing intelligence are concrete proposals that will certainly increase the current system's effectiveness. The FEM position complements the Orgalime paper and highlights similar issues of concern.

FEM is working closely with Orgalime to promote the industry's views on this proposal in the most efficient manner given

the tight legislative calendar with the elections approaching.

Key points for the future

- Monitor the legislative calendar of the compliance and enforcement file in the EP and the Council
- Liaise with Orgalime throughout the legislative process to effectively promote the industry's position to the legislators

3.4 – Outdoor Noise Directive

The European Commission launched the review of the Outdoor Noise Directive (2000/14/EC) in 2014, which sets noise emission limits and labelling requirements for various types of machines. However, the review process was put on hold for a year after the finalisation of the ODELIA study report on the suitability of the current OND scope and noise limits in 2016.

Then, the European Commission launched an evaluation and impact assessment study on the OND: it aims to assess possible changes in the Directive, such as stricter noise limits and removal of third party certification.

FEM actively contributed to the study through meetings with the consultancy team and the Commission, written comments and participation in the different consultations. FEM also liaised with Orgalime, which represents all impacted sectors in the mechanical industry.

Moreover, the European Commission published an 'Inception Impact Assessment' that identifies problems related to the OND implementation, requiring thus a revision of the legislation. FEM shares the main implementation issues pointed out, including the non-adaption to technical progress and conformity assessment procedures as well as administrative and reporting burdens. Therefore, FEM sup-



Anne Claire Rasselet
Environment & Energy

ports a full revision of the OND rather than implementation improvements.

FEM highlighted that the OND has brought minor benefits to the European material handling industry, while it has negatively impacted on its competitiveness without significant improvements of the health of EU citizens and environment.

As regards the future Outdoor Noise Regulation, FEM calls on the European Commission to consider noise emissions in relation to the overall legislative environment where many different requirements apply to the same product. This not only poses technical challenges but it also monopolises R&D resources. In this context, FEM believes that the Internal Market objective of the OND can be achieved at a lower cost for equipment manufacturers. Concretely, self-certification should be possible for all types of equipment and the database and reporting obligation should be abolished. Besides proposals for changes, FEM requests stability of the legislative framework: keeping the current scope and noise limits, but also the current labelling requirements.

As a next step, the European Commission will prepare its proposal for a revised legislation on the basis of the evaluation and impact assessment study outcomes. The proposal is expected at the end of 2019 or beginning of 2020. FEM will continue playing an active role, notably by participating in consultations.

Key points for the future

- Follow up the different steps of the OND review process, notably the drafting of the Commission legislative proposal and the subsequent decision-making process
- Participate in the European Commission Noise Expert Group to defend FEM interests

- Continue the liaison with other industries, notably through the Orgalime OND Task Force, to build an industry coalition on general aspects, such as removal of third party certification

3.5 – Radio Equipment Directive

Over the last two years, FEM has been actively involved in the discussions related to the status of “combined equipment” (non-radio products functioning with radio equipment), in the context of the elaboration of the Guide on the application of the Radio Equipment Directive 2014/53/EU (RED). As a starting point, FEM and CECE prepared a joint position paper requesting the Commission to provide legal certainty concerning the applicable pieces of legislation for combined equipment, and asking for a clear demarcation between the responsibilities of the machine/non-radio product manufacturer and those of the radio manufacturer.

The European Commission provided an unofficial interpretation on the applicability of the RED to “combined equipment” in March 2017, yet this was not included in the official RED Guidelines published a couple of months later. In other words, according to the Commission interpretation, a “combined equipment” is defined as a radio product which meets two conditions: being incorporated into a non-radio product and being permanently affixed to the latter. In this case, the RED applies to the combination of the two products. In the other cases, when the radio equipment can be readily and easily removed from the non-radio product, the two products are considered separate, and therefore, the RED applies to the radio equipment only.

To provide further clarification on the applicable legislation for the cases above and the obligations of materials handling manufacturer when incorporating a radio equipment into a non-radio product, FEM produced an FAQ guidance document on



Ioana Smarandache
Internal Market

the RED. The document also makes references to two exclusions which may apply to some FEM equipment, namely fixed installations and vehicles/type-approved equipment. FEM also provided substantial input to the Orgalime Guide which specifically focused on the combination between radio equipment and machinery, and the required conformity assessment procedures.

In June 2018, the Commission published the second version of the RED Guide. In parallel to this exercise, a separate guidance document on the “Applicability of the Low Voltage Directive/Electromagnetic Compatibility Directive/ Radio Equipment Directive to specific categories of products” which includes the interpretation of the Commission on “combined equipment” was published in April 2018.

3.6 – Fluorinated greenhouse gases

Further to the implementation of the revised EU legislation on fluorinated greenhouse gases (Regulation 217/2014), FEM has issued an application guide for materials handling equipment. It helps companies integrating air conditioning systems in the machines they manufacture or import to comply with the requirements from the F-Gas Regulation.

The F-gas sets specific requirements for the import and use of fluorinated greenhouse gases, notably HFCs that are commonly used as refrigerants in air conditioning and refrigeration systems. As regards materials handling equipment, air conditioning equipment is integrated in certain types of forklift trucks, telehandlers, tower cranes or mobile cranes, generally in the cabin of the operator of the machine. This type of non-hermetically sealed mobile air conditioning system must comply with the requirements set by the F-gas Regulation.

3.7 – Chemicals legislation

FEM followed the review of the RoHS Directive that tackled legal inconsistencies,

such as retroactive effects and obstacles to secondary market operations. In addition to legal clarities, FEM welcomed the broader exclusion for non-road mobile machinery (NRMM) that benefits to specific industrial trucks and MEWPs connected to the grid. Indeed, NRMM with a traction drive powered by an external power source are now excluded, in addition to NRMM with an on-board power source.

FEM is also following an ongoing study on the restriction of substances and the exemptions under the RoHS Directive. Results are expected mid-2019 and are likely to lead to the restriction of further substances used in electrical and electronic equipment but also combustion engine powered equipment which have electric or electronic functions.

As regards the REACH Regulation, FEM focusses on relevant requirements for equipment manufacturers, such as communication obligations and provisions restricting the use of chemical substances. As an example, FEM closely monitors European Commission’s decisions granting authorisations for the specific uses of chromium trioxide, as well as manufacturers’ rights and duties to remain compliant with authorisation provisions. FEM also followed the development of guidance documents on substance restriction, such as the use of nickel and compounds in equipment.

Key points for the future

- Monitor the implementation of communication and reporting obligations, especially the new database on hazardous substances to be developed by the European Chemicals Agency.
- Monitor the study on the RoHS Directive and risk management measures under the REACH Regulation, notably future or revised provisions restricting the use of chemical substances

3.8 – Ecodesign

The European Commission started to implement its 'Circular Economy' policy in the Ecodesign framework, notably through a measure on electronic displays. Indeed, the draft legislation - published in the last days of 2016 - set a prescriptive technique to seal components, required marking of plastic parts and asked for relevant information for component processing at equipment's end-of-life.

FEM shares the ultimate objective of this draft legislation: facilitating dismantling, re-use, recycling and recovery. However, FEM raised concerns since it imposed mandatory specific design techniques rather than set performance requirements. The draft legislation tackled electronic displays integrated into industrial trucks, including electric warehouse trucks, mobile elevating work platforms, and intralogistic systems equipment, including stacker cranes.

Therefore, FEM requested the exclusion of "displays integrated or to be integrated into" other equipment considering the absence of impact assessment for the vast range of equipment potentially affected. FEM participated in the public consultation early 2017 and carried further lobbying actions in 2017.

In addition, FEM liaised with the various industry sectors integrating displays in consumer and professional equipment, such as toys, domestic appliances, heating and cooling equipment, garden machinery and digital technology.

Key points for the future:

- Monitor next steps of the decision-making process as regards the Ecodesign measure on electronic displays

- Monitor the implementation of the Ecodesign Framework, notably product specific and horizontal implementing measures impacting the material handling sector.

3.9 – Road Circulation

In June 2017 FEM, together with the other associations within ITF Road Circulation (CECE, CEMA, EUnited Municipal Equipment) published a joint position paper on the future Regulation on road circulation requirements for mobile machinery, which served as a basis for putting forward the industry's main statements at the Commission road circulation workshop on 9 June. ITF's core objective in anticipation of the new Regulation is to achieve a single approval system for mobile machines, which allows their circulation on the road across the EU, without further testing and additional national requirements.

FEM and other associations also took part in an informal meeting with the European Commission, in order to restate the industry's position and get a clearer picture of the policy options envisaged in the impact assessment process. ITF expressed their support to the New Legislative Framework (NLF) system, whereby self-certification can be used for most road circulation aspects, while third party testing should be performed for safety critical components only (e.g. braking, steering). The Commission sympathised with the industry's preferred legal framework, but indicated that Member States would have to be convinced that either a NLF framework or a hybrid approach would be most suited for the wide variety of mobile machinery applications, instead of a full type-approval system.

The European Commission published in November 2017 the inception impact assessment on the future Road Circulation Regulation. FEM provided its own response to this consultation, repeating the ITF messages from the joint position.

In February 2018, the Commission organised a second road circulation workshop, focusing on gathering views from different stakeholders regarding the possible technical requirements that should be considered in the future Regulation and its corresponding legal framework. Most of the Member States' representatives (from the Transport Ministries) were supportive of the type-approval system, as this is what they are accustomed to at national level with regard to road circulation requirements.

A specific questionnaire for Member States will help get an accurate understanding of the situation at national level in terms of road requirements. This will be part of an open public consultation on the future Road Circulation Regulation. In the meantime, FEM continues to be active in the ITF Road Circulation group contributing to the ongoing efforts of drafting suitable technical requirements for this new legislation.

3.10 – Digitisation

In the past two years, a number of new regulatory issues related to digitisation have popped up. In April 2017, FEM replied to a public consultation and presented its key principle on "Building a European data economy": 1) Preserving the freedom of contract, 2) Removing unjustified national requirements on data localisation, 3) Preserving the right to licence (or not) the use of non-personal data, and 4) Providing guidance on data ownership and management.

A few months later, the European Commission presented a proposal on the removal of barriers to the free flow of non-personal data. FEM largely supported the proposal,

which will hopefully be preserved during the decision-making process and adopted before the European elections in 2019.

FEM also started working on a cybersecurity package presented by the European Commission in September 2017. Because of the horizontal nature of this issue, the work is done through Orgalime, FEM playing a supporting role by providing input. The same applies to the more recent discussions on artificial intelligence for which FEM feeds in the positions of Orgalime.

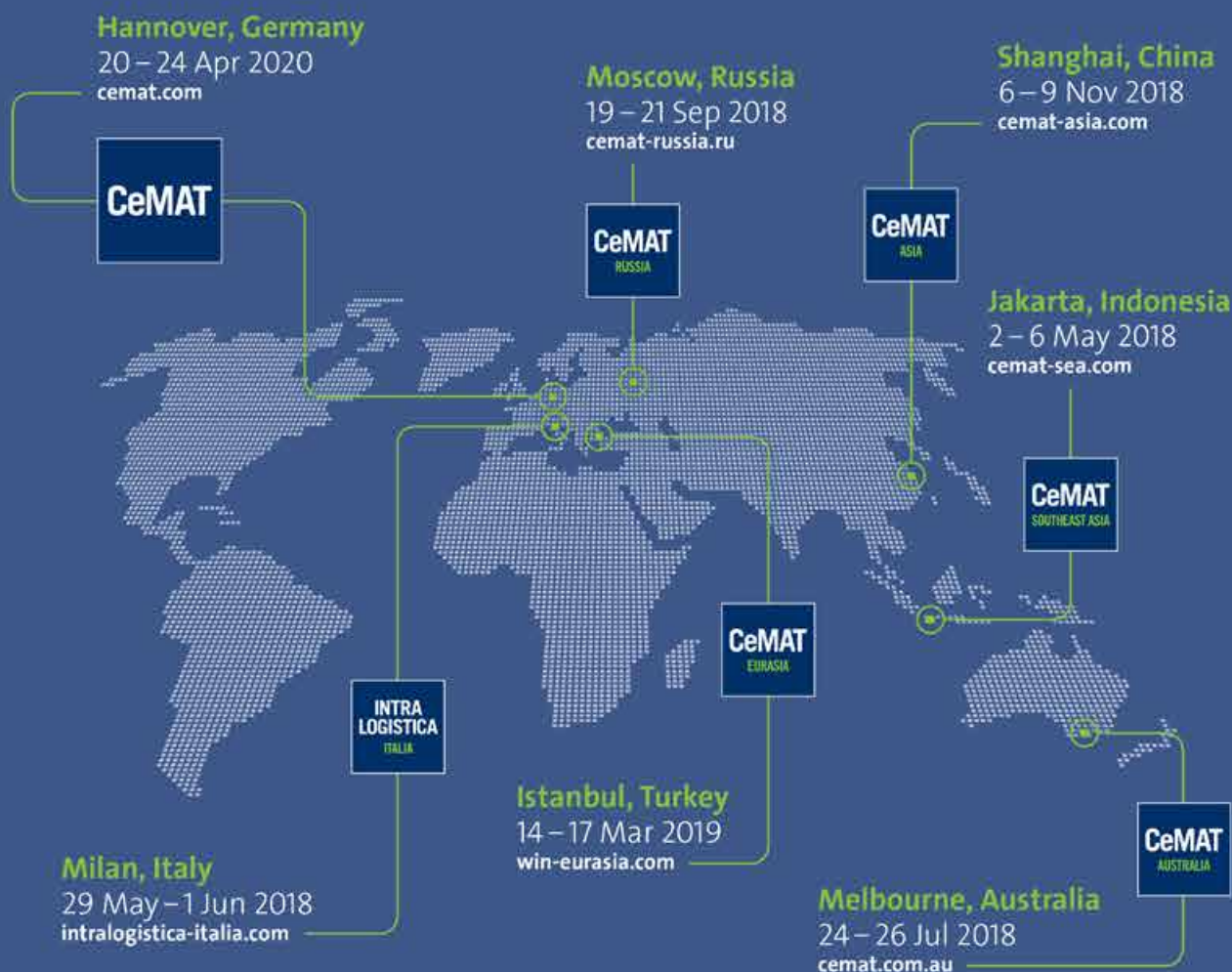
As these topics have gained in importance and require different types of expertise that purely technical, FEM has set up a dedicated Task Force Digitisation. It is composed of experts in different disciplines (AI, cybersecurity, legal...) acting as a pool to feed in FEM positions or at Orgalime level.

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- Ship loading and unloading systems
- Loose bulk sorting equipment
- Pneumatic handling equipment for bulk materials

The Product Group Conveyors for Bulk Handling used to monitor standards work for continuous conveyors undertaken in CEN Committee TC 148 and ISO Committee TC 101. While ISO Committee 101 has only been active with regard to systematic reviews of standards for the last two years, CEN Committee 148 is working on revisions of some standards e.g. EN 620:2002+A1:2010 - Safety and EMC requirements for fixed belt conveyors for bulk materials.

The Product Group would be ready to start activities very quickly if European manufacturers in the field of bulk handling conveyors showed interest in specific issues which should be dealt with on a European level.

MEMBERS

The Product Group has been dormant during the report period. Therefore the product group has no members for the time being.

WORK IN PROGRESS

The Product Group has been dormant and only routine work has been performed, e.g. printing and distribution of existing FEM-Documents, or maintenance of the Product Group website.



Armin Weih
Secretary

Cranes and Lifting equipment

The Cranes and Lifting Equipment Product Group (CLE) is the voice of the cranes and lifting equipment industry covering tower and harbour cranes, mobile cranes, lifting and hoisting equipment, as well as winches. It has a long and successful tradition, going back to the former FEM Sections Heavy Lifting and Handling Equipment, Mobile Cranes and Series Lifting Equipment which have existed since the very foundation of FEM in 1953.

Today, the CLE Product Group has 7 national members from the Netherlands (DMH), Finland (The Federation of Finnish Technology Industries), France (CISMA), Germany (VDMA), Italy (AISEM), Spain (FEM-AEM) and Turkey (ISDER).

It consists of three Sub-Groups:

- ▶ Lifting Equipment & Hoisting Equipment (EOT)
- ▶ Tower & Harbour Cranes (THC)
- ▶ Mobile Cranes (MC).

The key role of the Group is to draft and communicate industry positions. It represents the technical, economic and political interests of the industry. It strives for technical progress and for improving safety at work through the development of FEM guidelines and by actively supporting the development of standards (e.g. CEN, ISO and IEC), and programmes to improve the qualification of crane operators (e.g. ECOL). It also acts as a bridge-head between industry and authorities, formulating and communicating the industry's position on European and world-wide legislation.

In the past two years, a variety of EU legislative issues affecting the cranes and lifting equipment industry have been under review. CLE provided input to the review of the Outdoor Noise Directive and the Machinery Directive and actively followed

the revision of the Machinery Guide. In addition, the product group helped member companies to comply with new legislative requirements affecting crane manufacturers, such as the Radio Equipment Directive (2014/53/EU) and the Regulation on exhaust emissions from Non-Road Mobile Machinery (EU 2016/1628).

For the Lifting Equipment & Hoisting Equipment (EOT) sub-group, with members from Germany, Finland, France, Italy, Spain and Turkey, the following main items were on the agenda:

Developing of a new EOT paper comparing the new approach to hoist classification according to EN 13001 and re-classification according to FEM/ISO classification;

Monitoring and supporting work on EU legislation;

Working with the World Materials Handling Alliance on comparing world standards for EOT cranes;

Following the work of standardisation bodies:

- CEN/TC 147 - Cranes - Safety; in particular the following working groups:
 - ▶ CEN/TC 147 WG 14 Bridge and Gantry Cranes
 - ▶ CEN/TC 147 WG 17 Power-Driven Winches and Hoists
- ISO/TC 96 - Cranes
- IEC (International Electrotechnical Commission)

Publications: 14 FEM EOT documents are currently published.



Juha Erikilä
Former President



Paul Zepf
Secretary

The Tower and Harbour Cranes (THC) Sub-Group, with 13 members from France, Germany, Italy, Spain and Turkey, is working on Regulations and Standardisation activities. In 2017 and 2018, the main activities were:

Supporting CEN/TC 147/ WG 12 « Tower cranes », especially the current revision of EN 14439 (Tower cranes - Safety) by providing a text proposal related to new safety requirements for means of access in tower cranes. This work was finalised within FEM CLE THC and then sent to standard-makers in a second step in order to improve the draft before the CEN enquiry;

Informing the members about some new regulatory aspects;

Forming an ad hoc group of experts in order to analyse and make some amendment proposals on the FEM « high performance fibre ropes » guidelines developed by our colleagues of FEM « Mobile Cranes » Sub-Product Group. This task was concluded by an agreement to extend the scope of the guidelines to Tower Cranes, with some modifications taking into account the application;

Forming an ad hoc group of experts in roading homologation, in order to prepare a text proposal (in conjunction with some CECE manufacturers) for a future set of harmonised road requirement for slow speed towed equipment and propose this text at the Industrial Task Force (ITF) « Roding », where all interested industrial sectors for a harmonised road regulation within Europe are present. This task is still pending.

Publications: 4 FEM THC documents are currently published.

The Mobile Cranes (MC) Sub-Group, with members from France, Germany, Italy, the Netherlands, Spain and Turkey, has two sections and six Working and Task Force Groups.

Wind related issues formed the major work items for the Technical Committee. The main work items for the past two years were:

High Performance Fibre Ropes: together with experts from rope and synthetic fibre manufacturers as well as universities, MC developed the first guideline on the safe use of high performance fibre ropes in mobile cranes, which was published in August 2017;

Wind: in 2017 and 2018, MC together with ESTA and VDMA held two one-day “Wind Summit” conferences to raise awareness on the challenges presented by the increasing size of the new generation of on-shore wind turbines. Wind Safety Culture: in 2017, MC established a new liaison with the VDMA **Wind Safety Culture** Working Group and developed a safety culture guidance for lifting which will be included in the VDMA Wind Safety Culture brochure to be published in 2018. **FEM 5.016:** in April 2017, an updated and improved version of the Safety Issues in Wind Turbine Installation and Transportation Guideline was published;

Road Regulations: MC has established a Working Group to comment on the most recent developments in the field of the framework directive for road homologation including the introduction of several UNECE directives substituting EC directives. CLE is an observer at the UN World Forum for Harmonisation of Vehicle Regulation (WP 29) and participates in meetings of the different working parties e.g. GRRF;

European Regulations: FEM and ESTA have established a working group “European Regulations” covering all aspects of cranes on roads and when working as a crane. This working group meets 2-3 times a year (often in parallel to ESTA congresses) and is considered as an effective and proactive



Richard Cleveland
THC Secretary

platform for information exchange;
Standardisation: support to CEN/TC 147 WG 11, where a revision of the entire EN 13000 regarding mobile cranes is currently under preparation;

ECOL: together with ESTA, MC is working to define and harmonise requirements of a European Crane Operator Licence in Europe. In May 2017, the ECOL Foundation was founded and the pilot course for training European crane operators was launched in Spring 2018. ECOL is supported by the EU through the Erasmus plus programme;

Publications:

- ▶ FEM 5.016 Safety Issues in Wind Turbine Installation and Transportation, published in April 2017.
- ▶ FEM 5.024 Guideline: Safe Use of High Performance Fibre Ropes in Mobile Crane Applications, published August 2017
- ▶ 18 FEM MC documents are currently published.

Liaisons: MC has liaisons with two international groups:

International Crane Stakeholders Assembly (ICSA):

ICSA meetings were held in March 2017 during CONEXPO in Las Vegas, and November 2017 in Amsterdam.

Members are:

- ▶ CICA (Crane Industry Council of Australia)
- ▶ ESTA (European Association of abnormal road transport and mobile cranes)
- ▶ SC&RA (Specialized Carriers & Rigging Association, USA)
- ▶ CRAC (The Crane Rental Association of Canada)
- ▶ AEM (Association of Equipment Manufacturers, USA)

- ▶ FEM (European Materials Handling Federation)
- ▶ CCMA (China Construction Machinery Association) and MHCC - China

Mission Statement:

- ▶ Facilitate information sharing and meaningful dialogue between crane industry stakeholders on safety and technical & regulatory issues of concern

Publication of documents: Three ICSA position papers are available for download on the FEM CLE webpage:

- ▶ ICSA 001: Leaving mobile cranes unattended
- ▶ ICSA 002: Lifting a load with several mobile cranes
- ▶ ICSA 003: Lifting of persons with mobile cranes

In October 2018, CICA will host the ICSA annual meeting in Melbourne

International Crane Exchange (ICE):

The International Crane Exchange manages the world statistic programme for mobile cranes. Currently three associations are participating in the ICE programme: AEM (USA), FEM (Europe) and CEMA (Japan). For the years 2018-19, FEM acts as Secretariat of ICE. Meetings were held during CONEXPO in Las Vegas in March 2017 and during INTERMAT in Paris in April 2018.

At the moment 30 FEM documents are available and many have been partly incorporated into EN Standards or are quoted in EN Standards, which means they are quasi harmonised documents. This shows that FEM documents from the Cranes and Lifting Equipment Product Group have reached an exceptional status in the world of standards.

Elevating equipment

The Elevating Equipment Product Group was formed at the 2004 Congress and has since met 2 or 3 times a year in various European cities, but most recently has used venues in London, UK. Some meetings are aligned with other FEM meetings, including the biennial Congress and CeMAT, for the convenience of members.

The Product Group 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 and other 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 European levels to facilitate free trade.
- Assisting and advising relevant authorities at national and European levels on all matters concerning the products covered.

During the period 2016-2018, the Product Group work has included:

- Reviewing FEM guidance on Dock Leveller Selection to make customers, specifiers and end users aware of the importance of selecting equipment that will support the required total load when used with the chosen materials handling equipment. **Dock Leveller Deck Plate Awareness Guide (FEM 11.004).**
- In December 2017 this document (FEM 11.004) was appended to include clarification of the correct way for manufacturers to publish the rated load of a dock leveller and was renamed, **Guidance on Dock Leveller Selection (FEM 11.004).**
- Reviewing the already published FEM guidance on the **Safety, Performance and Use of Vehicle Restraining Devices (FEM 11.005)**
- Reviewing and drafting amendments to the FEM guidance document: **Safety on and around a Vehicle Loading Area (FEM 11.003).**
- Reviewing the separate FEM guidance documents on the **Thorough Examination of Lift Tables (FEM 11.001) and Dock Levellers (FEM 11.002).**
- Continuing work on a new project, developing Guidance on **Ways to Save Energy in a Vehicle Loading Dock Area.**
- Promoting the benefits, to manufacturers and purchasers of equipment, of using the appropriate harmonised CEN standard.



John Meale
President

- Promoting the discussion of CEN standards, draft standards and proposed amendments between those manufacturers, from different EU Member States, who are not directly involved in standardisation activities.
- Evaluation, discussion and input to FEM central on various EC Directives and initiatives discussed at FEM Task Force meetings.
- Evaluation and discussion of other EC Directives and documents produced in CEN and ISO.
- Monitoring proposals for new national regulations which would restrict the free movement of equipment.
- Trying to attract more FEM national associations into membership of the Product Group for the benefit of their manufacturing members and those already working in the PG.

The applicable CEN standards are:

- EN 1570-1: 2011+A1:2014 Safety requirements for Lifting Tables serving up to 2 fixed landings. Under revision since 2016
- EN 1570-2: 2016 Safety requirements for Lifting Tables serving more than 2 fixed landings of a building for lifting goods with a vertical travel speed not exceeding 0.15mps.
- EN 1398: 2009 Safety requirements for Dock Levellers.



Tim Faithfull
Secretary

Industrial trucks

The Industrial Trucks Product Group is focused on communicating the industry's position on economic, technical and political matters.

The Group has been instrumental in achieving European and global industry harmonisation on safety issues primarily through its work in CEN and ISO standards committees.

The following countries are currently represented in the Product Group through membership of their National Associations:

- ▶ Finland (The Federation of Finnish Technology Industries)
- ▶ France (CISMA)
- ▶ Germany (VDMA)
- ▶ Italy (ANIMA)
- ▶ The Netherlands (DMH)
- ▶ Spain (FEM-AEM)
- ▶ Sweden (Teknikföretagen)
- ▶ Turkey (ISDER)
- ▶ United Kingdom (BITA)



Matthias Fischer
President

Technical Activities

FEM IT T, the Technical Standing Committee, meets once a year to review and discuss ongoing developments in European legislation, international standardisation (ISO and CEN) and collaboration with the national H&S authorities.

The Product Group followed the development of several pieces of European legislation, provided expert knowledge to the European Commission, and participated in public consultations on the following topics:

- Potential revision of the Machinery Directive 2006/42/EC and revision of the official Guide to the Directive

- Revision of the Outdoor Noise Directive 2000/14/EC and revision of the official Guide to the Directive
- New Regulation (EU) 2016/1628 on Exhaust Emissions (NRMM) and related supplementing acts (EU) 2017/654, 2017/655, 2017/656
- Revision of the Ecodesign Directive 2009/125/EC
- New Directive on Radio Equipment 2014/53/EU and transition from its predecessor R&TTE Directive 1999/5/EC
- Recast of Directive 2012/19/EU on Waste of Electrical and Electronic Equipment (WEEE)
- Evolution of Directive 2011/65/EU on the Restriction of Hazardous Substances in Electronic Equipment (RoHS 2)
- Regulation (EC) 1907/2006 on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

Representatives of the Product Group are actively involved in the FEM Task Forces Outdoor Noise, Machinery Directive, NRMM (Exhaust Emissions) and Digitisation as well as in the Technical & Regulatory Committee, providing input to FEM positions.

The following technical guidelines have been published:

- FEM 4.003 - Noise Information (Revision 2018)
- FEM 4.004 - Periodic Inspection of Industrial Trucks (Revision 2018)

- FEM 4.005 - 90°Stacking Aisle Width (Revision 2017)
- FEM 4.006 - Work Platforms use with Industrial Trucks (Revision 2017)
- FEM 4.101 - Hour Meter Reading (Revision 2017)
- FEM 4.102 - Foot Protection (Revision 2017)
- FEM 4.103 - Warehouse floors - Storage system areas operated by Industrial Trucks - Part 1 (NEW 2018, in Liaison with FEM PG R&S)
- FEM 4.104 - EC Declaration of Conformity and marking for the permanently mounted equipment of rough-terrain variable-reach tractors (NEW 2018)

The following technical guidelines are currently under development:

- FEM 4.105 Assistance Systems for Industrial Trucks
- FEM 4.106 - Guide for identification of non-compliant industrial trucks for ATEX applications

Statistics

The web-based FEM statistics contain reports on order intake and shipment figures of European manufacturers of industrial trucks and are the European input for the World Industrial Truck Statistics (WITS).

FEM IT ST, the Statistics Standing Committee, meets twice per year to discuss upcoming data queries and further improvements to the system. In general, ongoing monitoring to ensure data quality continues to be performed at FEM and WITS level.

Global Alliance

The Alliance of Industrial Truck Organisations (AITO) was established to discuss and work on global matters. Together with the group's work with other regional associations, this has led to a fruitful cooperation on many issues, such as the establishment of global industry statistics.

Current member associations of AITO are:

- ▶ ITA - Industrial Truck Association (USA, Canada, Mexico)
- ▶ CITA - China Industrial Truck Association (China)
- ▶ JIVA - Japan Industrial Vehicles Association (Japan)
- ▶ FEM - European Materials Handling Federation - Product Group Industrial Trucks (Europe)

The 2018 AITO meeting is hosted by FEM IT and takes place in conjunction with the FEM Congress in Antwerp, Belgium. In 2017, the AITO meeting was hosted by CITA in Chengdu, China, and coincided with the 20th anniversary of the Alliance.

The Presidents' Forum highlighted the historical record heights in the global industrial truck markets. Matthias Fischer, President of FEM IT, reported on the general economic development of the European market and assured the support of FEM for cooperation in the field of environmental requirements and sustainability which have been identified by AITO as future key topics.



Heiko Boekhoff
Secretary

The sub-committee Rough-Terrain Trucks (SC RTT) was created in order to focus on topics specific to the category of industrial trucks used outside.



Olivier François
President

This sub-group meets 4 times a year to discuss current and future developments in standards (CEN, but also ISO) and in European legislation:

- Revision of the Tractor regulation 2003/37/EC -> R167/2013: in force. Publication of a specific FEM RTT guide.
- Exhaust emissions regulation R2016/1628: published in 2017
- Revision of the Outdoor noise directive: interviews with consultant and open public consultation

- Road regulation: preparation of the future legislation and discussion with sister associations (agricultural equipment, construction equipment, municipality equipment, garden equipment)
- Revision of the Machinery directive 2006/42/EC
- Standardisation activity: drafting EN1459 series and ISO 10896 series; fuel consumption, and other future standards.

SC RTT addresses also other issues:

- Specific market concerns (Turkey, China...)
- Administration (duplicate of DoC...)

Publication of technical guidelines:

- FEM 4.104 Doc and marking for rough-terrain variable-reach (RTVR) tractors



Emmanuel Deparis
Secretary

Mobile elevating work platforms

The MEWPs Product Group covers all types of Mobile Elevating Work Platforms, including mobile and static vertical, boom type lifts and vehicle mounted.

The main objectives of the Product Group are to represent the technical, economic and political interests of the MEWPs industry and to promote the safe use of MEWPs by a strong and effective collaboration with all the stakeholders.

Over the period 2016-2018, the attention of the Product Group continued to be primarily focused on the legislation at European level and on European and international standardisation activities. This took the form of direct contribution to the FEM position papers on the revision of Outdoor Noise Directive (the inception impact assessment and the following consultation), on the Regulation on engines exhaust emissions for non-road mobile machineries (FAQ guideline on EU Regulation 2016/1628 in collaboration with FEM NRMM Task Force), on the revision of Machinery Directive (evaluation study) and the guideline to the Radio Equipment Directive.

Standardisation

During the period 2016-2018 CEN/TC98/WG1 has continued to develop the revision of harmonised standard EN 280 determining design calculations, stability criteria, construction, safety, examinations and testing requirements for MEWPs.

This has led to split EN 280 into two parts, prEN 280-1 and prEN 280-2 which are going under CEN public enquiry by the autumn of 2018.

At ISO level, the draft standard ISO 21455 Mobile elevating work platforms – Operator's controls – Actuating forces, displacement, location and method of operation has progressed and is going under DIS enquiry by the end of 2018.

Key points for the future

The group intends to continue to focus on the development of other best practice/technical guidelines looking at the incoming legislation that will affect MEWPs, notably OND but also the market surveillance package, sustainability and circular economy, and EU digital agenda.



Harald Fries
Former Secretary



Luisa Parisotto
President

Intralogistic systems

The Intralogistic Systems Product Group gathers system integrators and suppliers of complete systems. Examples of systems are automated dispatching and order picking systems, automated guided vehicles (AGV), complex baggage transport systems and automated storage systems in warehouses.

Digitalisation & data

On the occasion of its Plenary meeting, the Product Group organised a round table in October 2017. Members had the opportunity to exchange views with representatives of the European Commission on two major themes impacting the intralogistic systems industry, including digitalisation and the free flow of non-personal data.

In addition, the intralogistic sector exchanged views with Commissioner Andrus Ansip - in charge of the Digital Single Market - in a panel session about the data economy on the occasion of a conference organised by Orgalime. The Product Group representative highlighted business opportunities offered by data: 'the gold mine' for the intralogistic system sector.

Energy efficiency

Energy efficiency, which was the second topic of the round table, is also a major issue: energy represents the biggest costs of intralogistic systems in use. It is therefore a major competitive element in the intralogistics sector and a key priority for its customers.

The Product Group finalised its tool to benchmark energy efficiency of intralogistic systems. The Product Group, together with the Karlsruhe Institute of Technology, developed a common measurement method to calculate, measure

and evaluate the energy consumption of intralogistic systems. It addresses complete intralogistic systems, and also most of their material handling components, such as conveyors, sorting systems, shuttle cranes and stacker cranes. These methodologies make it possible to compare various systems on the same basis, thus ensuring fair and transparent competition. This tool has been designed for planners, manufacturers and purchasers of intralogistic systems.

From a regulatory perspective, the Product Group closely followed the Ecodesign requirements for electric motors and variable speed drives (Lot 30). The Group raised strong concerns about the possible extension of the product information requirements to all types of motors, which is likely to be unnecessarily burdensome for European intralogistic systems manufacturers.

Technical work

The Intralogistic Systems Product Group updated the FEM document 9.101 "Guideline / Terminology - Storage and Retrieval Machines - Definitions" (September 2016).

In addition, our Product Group published new technical documents:

- a)** 9865 "Energy consumption - determination methods (ECoDeMISE) - Calculation, measurement and evaluation methods of Intralogistics Systems and material handling equipment" (November 2017)



Jan van der Velden
President

b) 9.860 “Guideline Cycle time calculation for automated vehicle storage and retrieval system” - Part 1 (November 2017). This new technical recommendation aims to estimate the possible number of cycles per time achievable with an automated vehicle storage and retrieval system assuming defined operational conditions. Such a guideline allows manufacturers, operators and customers to check whether the plant characteristics guaranteed in the contract match the values during the acceptance test. The recommendation is split into two parts: the first part focused on light goods, while the second part dedicated to pallet goods is expected at the end of 2018.



Anne Claire Rasselet
General Secretary

Furthermore, the Product Group is working on a new technical document on “operational performance availability”. The publication is foreseen in 2019.

In total, the Product Group has 17 documents available.

Statistics

The Product Group develops statistics that are based on figures which come from its members. They can take part in two FEM statistical exercises:

a) FEM statistics OIIS “Order Intake Intralogistic Systems” 12 companies contribute to these yearly statistics, which started in 2006. These statistics are based on the place of installation of the intralogistic system, and not the place of production.

b) FEM Statistics S/R Machines 18 companies contribute to these quarterly statistics, which started in 1997. As with OIIS, the place of installation is taken into account. These statistics include the product sector “shuttle systems” with a division into number of aisles and number of shuttles, which are split into “shuttles for pallets” and “shuttles for boxes”.

In addition, a factsheet providing general information on the economic situation of the sector is available on the FEM website. The factsheet is illustrated with indexed figures from OIIS and S/R Machines statistics.



Johannes Rehner
Technical Secretary

Racking & Shelving

Introduction

The FEM Racking and Shelving Product Group held its Annual General meetings in Bordeaux in 2016 as part of the FEM Congress and then in Bilbao, Spain in 2017. These were attended by between 30 and 35 delegates from all over Europe with key discussions about priorities for future work and the operation of the organisation. The Management Board also held a number of meetings to provide recommendations and implement the decisions of the Annual General Meeting.

Management

Mr Anthony Gresham Jones decided to retire in May 2017, after acting as President for over 24 years. He was thanked by the Management Board for all his time and hard work and was presented with a special watch in recognition of these. The Vice President, Jos De Vuyst, representative of AGORIA, the Belgian Association, then took over as President after the May Board Meeting.

Mr Mike Savage has taken over as the UK representative on the Management Board.

Code Development

● CEN TC344

FEM R&S are also actively involved with the CEN Committee for the industry "CEN TC344 Steel Static Storage Systems", including funding the Secretariat and as a Liaison Group. The CEN TC344 Plenary meeting is held as a separate meeting within the FEM R&S AGM.

The major focus over the past two years has been the revision of EN

15512, which is the key standard for the design of racking. Proposed changes resulted in a large number of comments from the Mirror Committees and work then moved onto a major editorial overhaul. The second public enquiry is taking place from 30th October 2018 to 30th January 2019 with the formal vote in May 2019.

EN16681 Steel static storage systems: Seismic Design Code has recently been published.

● FEM Codes

A new code for Rack Protection, 10.2.16, was published in November 2017 and is available to purchase from the website. It covers both upright and frame protection and the purpose of this code is to provide information on the requirements, design and use of frame protection and upright protection for both-freestanding and upright-connected systems.

This Code was endorsed by the AGM and is available for sale, along with other previous Codes, on the www.erfed.org website. Sales of these Codes continue to increase with orders from all over the world.

A Worked Example for use with the Drive In Code is nearing completion and should be circulated for comments this summer, prior to publication. The Worked Example will provide important information and clarification for Design Engineers and Checking Authorities.

10.2.14 Warehouse Floors document has been completed in liaison with FEM Industrial Trucks. This Code will be published in 2



Jos De Vuyst
President

parts as below and these are due for approval at the 2018 FEM R&S AGM:

Part 1: Tolerances, deformations and methods of measurement

Part 2: Design requirements:
Interface with Racking and Shelving

CE Marking

FEM R&S has decided to lead the way with CE Marking of racking structures under the CPR (Construction Products Regulation).

As there is no Harmonised Standard relevant for Adjustable Pallet Racking, 11 FEM R&S member manufacturers have applied for an EAD (European Assessment Document) for Pallet Racking Components for external racking, racking with floors and rack clad structures with testing in accordance with EN15512 and manufacture in accordance with the relevant sections of EN1090.

When issued, any manufacturer will be able to progress an ETA (European Technical Approval) for a CE Mark under the CPR for components based on the EAD.

The ETA is voluntary, although components covered by a company ETA must be CE Marked.

FASTCOLD research project

The FASTCOLD Project (Fatigue design of steel cold formed racking components) partially funded by EC grants, researching fatigue issues in cold formed racking members has commenced work. FEM R&S is a partner in this 3 year European research project, which started in 2017.

Future Priorities

The following future projects are being considered:

- **FEM Shuttle Racking Design Code** FEM Shuttle and Mobile Racking Design Codes are being considered.

- **Worked Examples** Worked Examples for design in accordance with the revised EN15512 and with the FEM Cantilever Code.

- **EN Codes** The conversion of the FEM Shelving, Drive-in and Cantilever Codes to EN Codes through CEN TC 344. Review of EN 15620 through TC 344 will start once the work on 10.2.14 Warehouse Floors has been completed.

Membership

Any Countries which have a racking and shelving National Association, or any racking and shelving company (where no National Association exists), are invited to make contact, to ensure they are involved in the latest industry technological developments. European Countries are invited to be full members while non-European members can become Associate Members. All members are required to be members of FEM.

The Management Board welcome enquiries for Membership within the FEM rules.



Colin Hinton
Secretary

General Secretariat



Olivier Janin
Secretary General



**FEM - European
Materials Handling
Federation**



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Anne Claire Rasselet
Environment & Energy



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FEM National Committees

BELGIUM

AGORIA
BluePoint Brussels, Bd A. Reyers 80
BE - 1030 BRUSSELS
www.agoria.be

FINLAND

The Federation of Finnish
Technology Industries
Eteläranta 10, PO Box 10
FI - 00131 HELSINKI
www.techind.fi

FRANCE

CISMA
45 rue Louis Blanc
FR - 92400 COURBEVOIE
www.cisma.fr

GERMANY

VDMA Materials Handling and
Intralogistics
Lyoner Strasse 18
DE - 60528 FRANKFURT/MAIN
<https://foerd.vdma.org>

ITALY

AISEM
Via Scarsellini 13
IT - 20161 MILAN
www.aisem.it

LUXEMBOURG

Fedil Metal
7 rue Alcide de Gasperi, BP 1304
LU - 1013 LUXEMBOURG
www.fedil.lu

THE NETHERLANDS

Dutch Material Handling
Zilverstraat 69
NL - 2718 RP ZOETERMEER
www.dutchmaterialhandling.nl

POLAND

PSTM
Ul. Szarych Szeregów 27 lok 8
PL - 60-462 Poznań
www.pstm.org.pl

RUSSIA

NRSEA
Tessinsky Lane 5, p.1
RU - 109028 Moscow
<http://nrsea.ru/en>

SPAIN

FEM-AEM
Av. Diagonal 647 Planta Baja
ES - 08028 BARCELONA
www.fem-aem.org

SWEDEN

TEBAB
Storgatan 5, PO Box 5510
SE - 114 85 STOCKHOLM
www.materialhanteringsgruppen.se

TURKEY

ISDER
Baglarbasi Mah. Kumru Sok. No:18/1
Evrans Merkezi Kat:1
TR - 34844 Maltepe, Istanbul
www.isder.org.tr

UNITED KINGDOM

BMHF
Airport House, Purley Way
GB - CROYDON CR0 0XZ
www.bmhf.org.uk

Associate Member

IRAN

ILS
Asra Building, 5th St., South Pirozan Ave, Hormozan Ave, San'at Sq, West (Qods) Tow,
IR - TEHRAN 14666436891
www.ilscs.ir



FEM aisbl n° 0874265354
BluePoint Brussels, Bd A. Reyers 80
B-1030 Brussels

Tel: +32 (0)2 206 68 66
E-mail: info@fem-eur.com
www.fem-eur.com

EU Transparency Register: 2406888115-97

FÉDÉRATION EUROPÉENNE DE LA MANUTENTION
EUROPEAN MATERIALS HANDLING FEDERATION
EUROPÄISCHER VERBAND FÜR FÖRDERTECHNIK
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