



SPECIALIST PLANNERS AND OPERATORS OF TRANSPORT EQUIPMENT STAY UP-TO-DATE

The “technology and innovation day” for specialist planners organized once a year by LiftEquip is turning into a tradition and is a must for every engineer engaged in planning work. The number of participants is growing steadily. On the last day of November 2010 LiftEquip organized this information day for the fourth time with a lot of dedication. The most important modifications for the German elevator industry were addressed, the forthcoming radical changes of standards and regulations were conveyed, the state-of-the-art technology of products and the standing of LiftEquip with its authority in the field of consultation and service were illustrated.

Karl-Otto Schöllkopf, a member of the executive board of ThyssenKrupp Aufzügewerke and the LiftEquip chief executive Sven Schenk welcomed the numerous guests. Together they explained the highlights of this event which is of such special interest to elevator planners.

After his words of welcome Sven Schenk continued to give some accounts on the elevator industry. He disclosed how planning, fabrication and assembly of new lift systems are constantly and rapidly changing. This is demonstrated by the current planning and assembly trends. This development also embodies modernizations. Building owners and operators always require individual products. Specialist planners are constantly required to pro-

vide the best personal consultation, individual product designs as well as the best possible and reliable project planning effort. This requires manufacturers and suppliers to offer to the planners a number of varied support efforts.

LiftEquip is pursuing this central idea. It falls back on the elevator technology know-how and the continued qualification of its staff and on the certified quality, tested and documented fabrication by elevator specialists, the attractive value-for-money terms and the aspiration to render a perfect performance when orders are carried out. The service and the guarantee that deadlines will be met are promised. At the same time reference can be made to the special services offered by “LiftEquip on Tour” allowing information events, staff training courses or in-house fairs to be organized on the customer’s premises.

For the rest of the event Sven Schenk handed over the presiding function to Volker Lenzner who presented the speakers and their papers. He also spoke about the forthcoming changes of standards, products and services.

Standards and directives

With his paper titled “Standards and directives – what’s new” Patrizio Fontanrosa first talked about the European directives and referred to the status of the

planned structure and the contents of the series of standards 81. The audience showed a keen interest in the explanations concerning the major features of the safety rules for the “elevator car’s protective devices preventing unintentional movements” conform to DIN EN 81 1/2 A 3 including the new “definitions for lift systems” contained therein, which will become effective on July 1, 2011.

This was followed by a list of new national regulations, technical rules and the TRBS in particular. The DIN, VDI and DAFA directives which are still being discussed were also mentioned. Reference was also made to the expected new rules governing the maintenance and service conducted by specialized companies or notified inspection bodies. Topics like maintenance, inspection and routine tests were directly addressed.

Products and services

Using the LiftEquip series, Eberhard Vogler presented the “Modern drive technology”. He outlined the clear benefits offered by the gearless technology for new lifts and the mass market. Several reasons were brought forward which speak in favour of a use of synchronous machines instead of asynchronous machines. The impacts of the efficiency on the energy consumption were explained and demonstrated by means of exam-

ples. The reduction of power losses was presented as one of the major goals to be achieved in the course of planning activities. In view of the forthcoming modernization of more than 30% of the 680,000 elevators in Germany, the illustrations relating to the performance spectra for “geared drive units” were important, too. Comparative and performance tables helped to perceive the different applications. Volker Lenzner complemented his views by giving a number of practical examples for geared as well as gearless solutions and presented new aspects to achieve a machine roomless operation. He never lost sight of the requirement to meet most varying customer demands by referring to “Systems from one source”, their most effective assembly and their most economic maintenance.

Oliver Schur then reported on “TWIN in modernizations – space-saving concepts used in lift system planning”. His views on vertical transport systems in highrise buildings, the multiple-car system concepts and the basic structures of intelligent control systems were very convincing. Although the TWIN or double car systems do not constitute the major part of a planner’s daily work, the specific steps contain developments which – in modified form – could already now provide tasks and solutions for a vertical development of buildings. This particularly applies to the new building culture in capital city regions in Germany and Europe. With the first TWIN solution in the University of Stuttgart and other examples, current modernizations were brought to the attention of the audience.

Jens Deppenmeier then provided the appropriate planning approaches by talking about the “Principles and methods applied to calculate the transport capacity and its efficiency”. It seems that in the future a calculation of the transport capacity will have to complement the determination of the “designated use” when planning is started. This condition should also apply to the planning of the development of barrier-free multi-storey buildings. The proposal was made to introduce simulation in order to present in a comprehensible manner the planner’s calculations to the building owners. It is a matter of course for LiftEquip to offer to planners and building owners a special service allowing them to plan the TWIN or double car systems and their use and to calculate the transport capacity.

Dr.-Ing. Wolfgang Scheunemann explained the “Trends for new ropes”. He started with the conclusion that “ropes are getting thinner and thinner”. One reason more to convince tradition-conscious planners that the reduction of the diameters conform to the state-of-the-art

technology really yields technical as well as economical benefits. This not only applies to fabrication. An overall assessment showed the advantages of a possible use of smaller traction sheaves or ropes with a synthetic sheath. This produces a higher safety under reversed bending stresses, reduces the amount of wear and provides a clear sign when a rope needs to be discarded. But one thing will never change: a uniform rope loading, the assessment of elevator rides using a diagnosis tool and the ride counter will be the prevailing additional criteria for an assessment of the rope condition to see if it has to be discarded or not. But the upkeep is easier. Examples given with respect to the selection of ropes, the assembly and maintenance verified these theories.

With his paper titled “Development of a new directive” Dr.-Ing. Stephan Rohr presented to his audience the basics of the VDI Directive 4707 as a means of motivation. As an immediate result this concept gave birth to the new RPI series of frequency converters.

Starting with a closer examination of the ride cycle, the speaker continued with the benefits offered by a “sustained” control of the energy requirement and control system for each type of application. At the same time reference was made to the energy generated during rides which can be fed back into the public supply network. The use of such a control system may also prove to be beneficial in terms of a sparing use of components. Function charts of the new generation of control systems and energy consumption diagrams of elevator rides illustrated this very clearly. A need for discussion among participants was registered.

“LED technology in lift engineering” and in a broader sense “Light as an element of the lift system and of the sense of well-being of passengers” were topics presented by Bernd Richter and Henrik Lietze. They provided detailed information with numerous examples on the use of lighting equipment in lift systems. The proper use of the different lights and of LEDs in particular was explained together with basic principles such as the illumination, colour reproduction, colour temperature, luminous intensity and lighting current. The impact which the lighting system has on energy efficiency was also taken into account. The service factor was presented and backed up by a case study. At last the speaker mentioned the LED light primer which LiftEquip can make available as a working tool to all planners.

The technological aspects of integral system technologies were finalized by some explanations with respect to the new

series of doors and to the comfort door S 8 A/K 8 A in particular. Markus Bruckmeyer reported on the inclusion of these doors in the door portfolio and how this has allowed LiftEquip to continue its efforts to become a "system supplier". In line with the technological progresses made, these efforts are promoted on a national and European scale to meet market demands.

Questions on the future of energy feedback

The attorney Dr. Dominik Skauradszun reported on a topic which intrigues the entire lift industry: the connection to the power network and the compensation for the excess power generated by feedback-type lift systems. He started his

report with a description of the current situation and continued with the legal aspects of the "law on renewable energy" and the "law on combined heat and power". The current state-of-the-art technology as described for example in the VDI directive 4707 was compared with the antitrust claim principles of the network agencies and the results were used to assess the chances of lift system operators to feed power back into the network. The only tangible conclusion was that operators should try "to conclude special contracts". It became obvious that a conclusion of such contracts is hindered above all by a lack of political interest. But participants were reminded not to relinquish in using their creativity to develop energy-efficient lift products or simplified network feedback systems.

Conclusion

The event provided participants with some new ideas for forthcoming elevator concepts. The modern component and especially system engineering technology was addressed and the appropriate planning measures were explained. The requirements to be met by modern planning were recognized. Numerous questions assisted the speakers as they were presenting their papers and also during the final discussion panel.

Workshops on calculation tools, luminous calculations or transport capacity calculations were held before Volker Lenzner and Sven Schenk bid participants farewell after a day which they believed to have been "very successful".

Friedhelm Meermann