

## **A sustainable standardisation policy for the competitiveness of European industry**

### **1. Introduction**

VDMA (German mechanical engineering association) is the biggest association of the capital goods industry in Europe. It is an interest representative, service provider and contact partner for over 3,000 German and European mechanical engineering companies. With around 935,000 employees in Germany and a turnover of 190 billion euro in 2007, the sector is the biggest industrial employer. The German capital goods industry is made up of a lot of medium-sized companies. Around 86% of all VDMA members are small- and medium-sized enterprises (SMEs) and two thirds of them employ fewer than 100 people.

German mechanical engineering is one of the leading providers of capital goods worldwide with an export share of 75% and a share of world trade of over 19%. German mechanical engineering is the world market leader in 18 of 32 comparable branches of expertise. This 'success story' is also very much based on around 3,000 national, European and international standards. This practical technical set of standard specifications has facilitated the harmonisation of market access conditions in the European Union as well as helped reduce trade barriers worldwide and thereby contributed significantly to the sector's leading international position.

In order to maintain and further expand the important role of standardisation for the international market, VDMA has been actively involved in standardisation policy, the participation of SMEs in standardisation and in the development of appropriate standards for more than six decades. VDMA bears the financial-, personnel- and organisation-related fields of the mechanical engineering standards committee (Normenausschuss Maschinenbau or NAM for short) in the German Institute for Standardisation (Deutsches Institut für Normung e.V. or DIN for short). NAM's main task is the inclusion of the industrial small- and medium-sized business community in standardisation work. VDMA invests over four million euro per year to oversee the standardisation activities of the NAM at national (DIN), European (CEN and CENELEC) and international levels (ISO and IEC) with around 40 fulltime employees. Over 2,000 voluntary experts look after the technical input in 27 specialist areas of the NAM with around 210 work bodies. NAM is the bearer of around 1,300 national standards (DIN, DIN EN, DIN EN ISO, DIN ISO) and is responsible for a further 1,600 international standards (ISO) at the national level. Further financial contributions for standardisation are generated by DIN members, 25% of which come from the mechanical engineering industries.

In the current discussion on standardisation policy at the European and national levels, there are a growing number of voices demanding:

- a stronger emphasis on standardisation,
- more intensive involvement and support of SMEs and
- free access to standardisation documents.

In the course of these discussions, VDMA is observing developments which influence and can even endanger the workability of standardisation, in so far as, for example the processes or even funding methods are not matched from the parts of all standardisation participants. VDMA has a great deal of interest in supporting and maintaining the workability of standardisation in a sustainable way but also feels responsible, where appropriate, to press ahead with required changes to processes and to participate in the organisation of an overall system. VDMA sees the current moment as the right time to consider possible changes, especially to the financing of the overall system, in order to counteract this at an early stage and to be able to initiate changes to processes in the long term should they be required.

This VDMA position paper therefore particularly sheds light on the current issues and points out, from the perspective of the mechanical and engineering industries, potential solutions as to how the demands can be accommodated. The demands and proposals are based on the experience of the mechanical engineering industries in standardisation. How this can be carried over to the overall standardisation system must be discussed with everyone taking part in the standardisation system. The position paper is designed to initiate the discussion in this respect.

## **2. Aims of standardisation**

VDMA fully supports the five aims of German standardisation strategy:

- “Standardisation ensures Germany’s position as one of the leading economic nations.” The ‘success story’ of the German mechanical engineering industries in the world market is based to a considerable extent on the existing and effective set of standard specifications.
- “Standardisation supports the success of the economy and society as a strategic instrument.” The work of around 2,000 voluntary experts in around 210 NAM work bodies shows the strategic significance that standardisation work has for mechanical engineering businesses.
- “Standardisation relieves the state from setting rules.” Around 600 harmonised standards, which for the most part lie within the technical responsibility of the NAM, make the EC Machinery Directive concrete and thereby contribute considerably to the practical arrangement and firm establishment of this state provision.
- “Standardisation as well as standardisation organisations promote the convergence of technology.” Standardisation structures are in need of further optimisation with regard to technology convergence. Therefore, for a growing number of corresponding standardisation issues, the NAM advocates finding practical individual case solutions in dialogue with other standardisation committees in order to avoid duplication and to be able to use limited resources as effectively as possible.
- “Standardisation organisations offer efficient processes.” The study, commissioned by the European Commission, ‘SMEs and standardisation in Europe’ listed the standardisation work of the NAM as one of the 23 best

practices for including SMEs in standardisation work. In standardisation work, the high quality of standardisation products is clearly to the fore. The technical binding of NAM standardisation consultants to VDMA takes care of that. In the preparation of standards the NAM particularly takes account of the needs of SMEs as well as participation in the standardisation process and in the preparation of information takes into account the results of the standardisation for companies.

### 3. Current challenges

#### 3.1 Significance of standardisation

Wherever standards define market access conditions, describe research results and new technologies and make them traceable, they underline their strategic significance for entrepreneurial trade. Wherever standards of compatibility, quality, safety and environmental criteria are decided on, they document their function along the global value added chain. Their state unburdening effect deploys standards in the area of security and health protection as well as environmental protection. Extending them to other areas of law, such as big areas of occupational health and safety would be a meaningful further development of the New Approach. In such a way, standardisation supports important aims which are in the public interest. The economic use of standardisation is obvious. For many regions, especially emerging markets, standards are of key importance for quick and sustainable development. Target groups in these regions are dependent on simple and free access to standards and the extent that they are disseminated is directly influenced by these criteria.

Other standardisation organisations, especially in the USA, apply standards specifically in the interests of and with the financial support of affected industries for the preparation and exploitation of new markets. Thus, for example, the Industrial Truck Standards Development Foundation (ITSDF) distributes standards free of charge, in order to achieve as great a distribution of them as possible.<sup>1</sup>

Companies in mechanical engineering follow this development and have been putting a high level of emphasis on standardisation for a long time already. For most specialist associations of VDMA, standardisation is a permanent agenda item for committee meetings, which the leading company personalities from particular sectors take part in. The close connection of the work of the NAM and the sector work and knowledge of VDMA technical associations considerably contributes to improving the awareness of companies of the strategic emphasis of standardisation.

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<sup>1</sup> See [www.itsdf.org](http://www.itsdf.org) on 10th July 2008: "Special note is in order at this point—ITSDF will make its standards available *gratis* to anyone who wants a copy. Our intention is to secure use of the standards on the widest possible basis". ITSDF reports in 'Forkliftaction Newsletter' Number 362 of 20th May 2008 that the ANSI/ITSDF B-56er series of standards has been downloaded from the website more than 20,000 times since the ITSDF made available the standards free of charge in April 2006.

## **VDMA demands:**

The strong emphasis on standardisation will continue in the mechanical engineering industry and will increase if standardisation is orientated according to the following principles:

- High market relevance: Standardisation must be orientated to the needs of the market and offer practical solutions.
- High level of dissemination and market penetration: Market relevant standards must be widely disseminated in order to be able to display their market-supporting effect.
- High level of attractiveness: Standardisation must sufficiently take into account the interests of the industry concerned.
- High level of internationality: Standardisation must support access to global markets and generate a high level of international acceptance.
- High level of competence: Standardisation must offer practical solutions, which are regarded as appropriate by those concerned.
- High level of flexibility: Standardisation must promote economic development and must not restrict room for innovations.
- Active scope for organisation: The development of standards must offer companies the possibility to introduce their subject competence effectively and efficiently.
- High level of transparency: The contents of the standards must be transparent and easily available for those concerned by them. More attention needs to be paid to the intelligibility of the standards. Not just the use by SMEs is to the fore but also practicality and efficient applicability under a high pressure of work in everyday operational conditions.
- High level of acceptance: All interested parties should share in the consensus building from the outset, act as reliable partners and stick to the commonly developed standards results. Stable standards are a considerable factor with regard to the market access of products in terms of reliability of planning for companies.

### **3.2 Involvement and support of SMEs**

Small- and medium-sized enterprises (SMEs) are the entrepreneurial backbone in Germany and in the whole of the European Union. They make a decisive contribution to creating value, employment and innovation and act very successfully and self-assuredly on world markets.

Standardisation therefore has the same value for SMEs as for larger companies. However, working together on standards as well as information and access to the standards affecting them, place SMEs before significantly more difficulties. The reason is that usually they do not have the required personnel capacities. The policy therefore requires that SMEs are involved in standardisation more fully and sustainably and that they are supported in the application and in actively working together.

The mechanical engineering industry already involves SMEs a great deal in standardisation work. That is due first of all to the small- and medium-sized enterprise structure of the sector. Secondly, this innovative branch has always understood the need to adhere to technical progress in a technical set of standard

specifications. Thus, three quarters of the industry experts in the standardisation bodies of the NAM come from SMEs. Many standardisation bodies are even managed by company personalities. But the practice of the standardisation work of the NAM also shows that the preparedness of SMEs to commit to standardisation work is only safeguarded if the standardisation processes are accompanied by technical and specialist secretariats, which free up the experts from administrative tasks.

### **VDMA demands:**

VDMA advocates that SMEs also play an important role in standardisation in the future and work together even more on standardisation. Access to norms and standards must also be further improved. In this respect, it is of very great importance that standardisation is oriented according to the following principles:

- Transparent conditions for participation: SMEs should not be excluded from actively working together in standardisation bodies through particular conditions of access. Greater emphasis must be given to technical expertise (a key element in the creation of value in the standardisation process) that is particularly offered by SMEs.
- Intensity in working together: SMEs must at an early stage have the chance to initiate standardisation projects, actively join in with standardisation projects and keep up to date with the status of standardisation processes. Organisational workflows in standardisation organisations must be further simplified. Current arrangements turn out to be partially intransparent due to their complexity.
- High levels of subject competence: In the development of standards, it must be ensured that both the experts from industry taking part and the other participants in the standardisation have the required technical competence.
- Competent support: The work of the standardisation experts from the SMEs must be promoted by simple and transparent procedures and by competent technical support on the part of the standardisation secretariats.
- High level of availability of standardisation results: SMEs must have the chance to find out about the results of standardisation quickly and at acceptable cost, in order to be able to introduce these results in the development and marketing of their products and services.

### **3.3. Access to standardisation documents**

The high value of standardisation, its market-supporting effect and the intensive participation of SMEs in standardisation and the broad application of the resulting standards can only be maintained if access to standardisation documents (draft standards and standards) is simply and efficiently organised. Access to standardisation documents has a considerable influence on the application and dissemination of these sets of standards. Ultimately, the market access of the products and services concerned will be decisively supported or hampered depending on how access to documents is carried out.

The discussion continues to be about access to standardisation documents and the issue of free access. The catalysts which are speeding up this discussion include:

- The European Commission, which, in its communication 'Towards an increased contribution from standardisation to innovation in Europe' of 11 March 2008, said that it was in favour of free access to standardisation documents, which support and make concrete legislation (harmonised standardisation).
- Activities of non-European standardisation institutes and the industry concerned in distributing (certain) standards free of charge in order to prepare and open up markets in their favour<sup>2</sup>.
- The increasing amount of free information on the internet and the accompanying user behaviour.
- The current cost schedules for the acquisition of European standards, which vary greatly from country to country - see Annex 1.

The discussion about access to standards has direct economic effects as today the income from the sale of standards generally makes a clear contribution to the financing of standards. If such developments continue, it seems urgently necessary to put the current funding of standardisation fundamentally to the test.

Within the mechanical engineering industry, companies are kept adequately informed of current standardisation projects, their status and the essential contents through the work of the NAM and the activities of VDMA sector associations. Despite the applications with regard to contents, personnel and financial input of the VDMA in the area of standardisation, it is currently not yet possible to make available a free specimen copy to the experts of the standardisation bodies which have worked on the standards in the context of the activity of the NAM.

#### **VDMA demands:**

The simple and cost-efficient, up to a free access to standardisation documents affect increasingly the international implementation strength and the value of standardisation. VDMA advocates exhausting all available possibilities and respecting the following principles:

- Easiest access condition: Access to standardisation documents must be organised as easily as possible for interested circles both in terms of administration and cost. Easy access to standards in the areas of safety and health protection, environmental and worker protection is an important requirement especially for emerging countries.
- Active dissemination: Standardisation documents must be made accessible to all the parties along the chain of economic added value for the achievement of their intended effect.
- Intensive use of all media: Access to standardisation documents must be made possible through the exploitation of all modern, existing and available media.
- Charging small sums: The constructive discussion about funding standardisation, which has already begun, must focus on reducing the dependence of funding for standardisation on sales revenue from

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<sup>2</sup> For example, the Industrial Truck Standards Development Foundation (ITSDF) distributes standards free of charge, cf Fn 1.

standards. In this sense, all possibilities for free access to standards must be thoroughly looked into.

#### **4. Conclusions**

Standardisation is and continues to be a key factor for the competitiveness of the capital goods industry. Companies from the German mechanical engineering industry – mainly SMEs – make a considerable contribution towards the development of appropriate standards in Europe and internationally. Industry's involvement has proved its worth. The mechanical engineering industry would also like to continue to meet its responsibility for the content and funding of standards. That is why VDMA is striving to have a broadly applied and constructive discussion about aspects with a content focus, framework conditions and sustainable funding for German standardisation work.

The DIN is a solid house with stable walls – the standards committees. Many standards committees – especially the external standards committees such as the mechanical engineering standards committee (Normenausschuss Maschinenbau or NAM for short) provide sector-related support for the DIN and thereby specifically ensure close practical orientation in standardisation work. The administrative and content-related support of the NAM notably ensures (see European Commission SME study) that, despite their limited resources, SMEs play a strong part in standardisation work and obtain support in the application of standards. In this respect, the example of the NAM supported by VDMA could be a model for other areas.

Access to standardisation documents that it is organised as easily and broadly as possible is the way towards successful German standardisation work. VDMA therefore is in favour of intensively discussing feasible models for the sustainable funding of German standardisation work in the DIN with all parties and together looking for sustainable solutions to the questions that come up. This discussion should not rule out any possible options at the outset.

Based on many years of financial arrangements for standardisation in the mechanical engineering industry as well as taking into account the DIN's new funding model, the following proposal for the financing of standardisation provides a contribution towards making concrete and stepping up the current discussion.

#### **VDMA proposal for the funding of standardisation (based on the current funding structure of the NAM)**

##### **1. Introduction**

The following VDMA proposal sets out a basic model – based on the current funding structure of NAM – as to how all DIN standardisation work could be financed. By so doing, a substantial aim is to strengthen standardisation in the DIN further via long-term stability of funding.

The proposal is based on the valid agreement between DIN and VDMA of 14.01.1949 (renewed in 1976) in which it is set out that:  
the mechanical engineering standards committee (**Normenausschuss Maschinenbau or NAM for short**)

- is affiliated to the VDMA financially, in terms of personnel and organisationally;
- is responsible for national, European and international standardisation in the area of mechanical engineering;
- implements standardisation according to the general principles of the DIN (statute of the DIN, DIN 820 etc.);

the **VDMA**

- bears all the office costs for the standardisation work of the NAM;
- has no claim on the cost sharing of the DIN;

the **DIN**

- makes available central services to the NAM free of charge;
- draws on all the revenues derived from the standardisation work.

Based on that, the full funding of mechanical engineering standardisation can be subdivided into four blocks of costs.

## **2. Standardisation cost blocks**

The following cost block breakdown is oriented to the new job costing and funding model of the DIN, which is expressly welcomed by VDMA as a step further towards more transparency and fairness in funding.

### **2.1. Technical and administrative support for standardisation projects of NAM**

All financial expenditure (personnel and non-personnel costs) which is generated by the NAM in the framework of the development of, as the case may be, the national mirroring of national, European and international standards (DIN, DIN EN, DIN EN ISO, DIN ISO and ISO) in its area of responsibility, are covered. Costs for secretariat management of the European and international bodies are also taken into account via the NAM.

### **2.2. Technical interest representation at a European and international level**

According to its strategic direction, the NAM devotes considerable resources in order to push through German interests in the context of CEN, CENELEC, ISO and IEC in its area of influence on a horizontal and subject specific level.

### **2.3. Central administrative services of the DIN**

According to the abovementioned agreement between DIN and VDMA, the NAM draws on the following central services of the DIN:

- Liaison agency for the external standardisation committees in the DIN;
- Facilities for support of associations and project development (especially DIN-Livelink);
- Services of the DIN standards test centre;
- Services of the DIN drafting office;
- Services of the Beuth-Verlag (publication of standards).

### **2.4. Interest representation via the DIN at standardisation policy level at CEN, Cenelec, ISO and IEC**

Representation of German interests in the steering bodies of CEN, CENELEC, ISO and IEC for horizontal standardisation policy questions.

### **3. Coverage of costs accrued**

#### **3.1 Cost blocks 1 and 2**

Cost blocks 1 and 2, which are around four million euro per year, are, as hitherto, covered from VDMA resources. Translated to the other DIN standardisation committees, this means that standardisation committees themselves prepare their 'direct costs standardisation' as the new DIN funding model also envisages.

#### **3.2 Cost blocks 3 and 4**

For cost block 3, direct accounting on a project basis is proposed. To cover these costs, the following alternative sources of funding could be drawn on:

- financial services from the economy (company and association resources)
- financial services from the public purse (corresponding to the share of the standardisation that unburdens the state)
- financial means from the development of new 'added value products' of the Beuth-Verlag (from the VDMA's viewpoint, for example revenue from the machine safety handbook and the newspaper 'maschinenrichtlinie aktuell', which are produced with significant technical support from VDMA employees, could be drawn from to cover costs on a pro-rata basis)

The breakdown in which these resources can be acquired must be negotiated with the parties concerned. Contributions from the public purse should take place in a framework which is consistent with the claim of a standard that is predominantly supported by the economy.

As cost block 4 is about safeguarding national economic and social interests of overriding importance, direct funding from the public purse (German Federal Ministry for the Economy and Technology) would be justified.

According to the new funding model of the DIN, cost blocks 3 and 4 are being funded from 'DIN own revenue'. The DIN licence income from the revenue of Beuth-Verlag is a big component of these resources. As is set out in detail in the main part of this position paper, however, VDMA is striving to clearly reduce the dependence of funding for standardisation from the sales revenue of standards.

### **4. Appropriateness of the VDMA proposal for other economic sectors**

As with the DIN's new funding model, the previously described funding model can be transferred to most standardisation committees or, as the case may be, economic sectors, especially for all the standardisation relating to products. Thus the basic applicability of this funding model can be taken as given. But whether this is feasible with regard to concrete financial means raised lies within the responsibility of the interested parties and must be discussed in that particular standardisation committee. For external standardisation committees, applicability can be assumed because of the similar financial structure to the NAM.

### **5. Contribution to the safeguarding of the fundamental standardisation in the DIN**

However the approach described cannot be transferred to real fundamental standardisation activities (e.g. in the Normenausschuss Technische Grundlagen of DIN - NATG). Cross subsidising is acceptable exclusively for these standardisation activities. Of course, VDMA is aware of its responsibility for fundamental

standardisation (especially with regard to the interests of the mechanical engineering sector) and would be prepared to offer a corresponding and relevant contribution here. However, this peculiarity, which is restricted to few cases, presents no obstacle in principle to the use of the proposed funding model.

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Annex 1

Price comparison for EN 12622:2001, 'Machine tools – safety of machine tools – hydraulic press brakes' with regard to various national standards organisations in Europe (prices in euro):

Organisation	Organisme Luxembourgeois de Normalisation (SEE)	ON (ÖNorm)	ON, download	DIN	DIN, download	BSI
Price in German	48.00	84.48	76.88	90.80	100.98	-
Price in English	48.00	84.48	76.88	150.00	166.83	199.00
Price in French	48.00	-	-	-	-	-