Fachsprachliche Neuprägungen : die Übersetzungsproblematik = Problems involved in the translation of newly-coined technical terms

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Fachsprachliche Neuprägungen – die Übersetzungsproblematik
(Problems involved in the translation of newly-coined technical terms)

Abstract

With each technical innovation, new terms are coined. These terms often have equivalents in other languages but – because of their relative youth – these are not universally known and are not quoted in the standard reference works. The only possibility left for the translator is to undertake a time-consuming search of the specialised literature, in particular the trade journals involved.

In other cases, the innovation is national, e.g. a new invention peculiar to that country which has no equivalent in other languages. Here, the translator is faced with the problem of providing a target-language substitute for the new term which will function properly.

There are also numerous instances of solutions to technical problems which, nevertheless, are entirely different in some aspect or another. This often leads to difficulties when the translator falsely assumes that he/she has found the «right» translation, only to learn that he/she has found another «faux ami».

Using original examples from translation practice, the difficulties will be demonstrated in more visible form.

Introduction

It is obvious that the entire scope implicit in the title cannot be covered within the time at my disposal nor would such a venture be within the limits of my own capabilities. Consequently, I shall restrict my comments to what I know best – my own experience in day-to-day translation work. The scientific aspect of my comments I leave to those more capable than I.

In view of the role played by English on an international scale [1], English will be used as the target language (TL) for comparison purposes; the source language (SL) will be German, of course, unless otherwise stated, in view of the fact that German as a specialised language is the title of this symposium.

This paper makes no pretence towards scientific structuring. Consequently, I would ask you to bear with me if I tend to digress or proceed in an unscientific manner.

Setting the scene

The modern generation of translators involved in the major world languages – especially English – is seldom, if ever, called upon to translate general-language (allgemein-sprachliche) texts. What they have to translate are normally «Fachtexte» (i.e. scientific, technical, specialized subject-matter texts). These subject matters entail the use of specialized terminology and presuppose a fair amount of knowledge of the subject itself. Within these constraints, the translator generally encounters severe difficulties in finding the information he/she requires and almost never is there an up-to-date bilingual dictionary available which deals precisely with the subject matter in hand. The craft or art of translation, as is often said, begins where the dictionary leaves off.

Various strategies are available to the translator, for example:

1) Consultation with subject-matter specialist
2) Literature search, etc.
3) Dictionary search (monolingual/monolingual)
4) «Logic»
5) «Inspired guesses»

In more than 20 years of translating experience, I know of no translator who translates everything directly by means of a dictionary. It is my experience that the translator – especially the scientific and technical translator – spends up to half of his/her time searching for information. The modern trend towards terminology banks is a welcome step but does not represent a panacea for all translation ills. Dictionaries are, of course, available in certain sectors but, what is often overlooked is that dictionaries are a two-edged sword: they can be *either* mines of information *or,* in the hands of the unwary, minefields.

Terminology

Within the Central Translation Services Department of Mannesmann Demag, members of our staff spend their time clarifying terminology. These terminologists check out the SL terms in question and define them in discussions with the company's own specialists. The TL equivalent is defined and clarified in collaboration with our sales offices, representatives, or even customers in the TL country.

The main advantage of having one's own terminology bank is up-to-date terminology, specific to the company's products and sanctioned by com-

pany specialists for the purpose in hand. Up-dating can be undertaken without delay.

An additional advantage is that larger texts can be split up over several translators with the certainty that the terminology (if not the style) will remain uniform. This is of particular advantage when dealing with longer jobs with short deadlines. (It is the information content which is of primary importance. Style is normally a secondary factor.)

As a spin-off, new members of our translation staff can drastically shorten their period of probation due to the fact that their terminology searches are reduced to terms *not* included in the terminology bank.

Terminology costs money. Indeed, terminology is much more expensive than is generally appreciated. Nevertheless, to ensure that the search for one term takes place once only, terminology research is a sensible institution. The result of the search is then recorded for the future. In a world geared to increasing productivity, the only way to increase the translator's productivity without detracting from the quality of the translation is to cut the time spent in searching for information.

The search for *existing* terms is difficult. The search for TL equivalents for new SL terms is *almost* impossible!

The neologisms to which I refer in the title of this paper relate to new inventions, newly-developed processes etc. generated within our company and should not be confused with such general neologisms as «stagflation», «Reaganism», «marginalization», etc. [2].

As a general introduction into dealing with neologisms, please allow me to digress into the field of standardization of new terms.

At the 1974 terminology meeting held in Vienna, guidelines were proposed for the adoption of new scientific and technical terms [3]. In the preamble, STOBERSKI correctly states that hitherto the process of creating nascent scientific and technological terminology has been fairly spontaneous and accidental.

On the other hand, when a decision is made to proceed with method, as was the case with «aquaplaning», the result was not as planned.

To prevent the introduction of yet another foreign word into the German language, the German automobile club ADAC ran a competition to find the best German equivalent for the English word «aquaplaning». The ADAC publicized the competition in its journal. Time was required to write the article, publish it, wait for the entries to arrive, judge the entries and then announce the results. In their wisdom, the jury chose «Wasserglätte» as the best German term. Their efforts, however, came too late! In the mean-time, «aquaplaning» – i.e. the foreign term – had already established itself in German and is still in use. No-one in Germany ever says «Wasserglätte».

To return to the terminology meeting in Vienna, the guidelines formulated in cooperation between UNESCO, FIT, ISO, and INFOTERM are worthy of praise inasmuch as the matter in hand was intended to deal with items and substances which could be of danger to life and limb if not properly understood. In other words, safety was of top priority. The following resolution was passed:

1 (2) «Standard committees, patent offices, publishers of scientific and technical dictionaries, editorial boards and linguistic committees should see to it:

a) that new discoveries, inventions, and scientific and technical concepts be given, in the language of origin, such names as could be adopted in other languages and in the international languages in their original form or with as few modifications as possible, and at any rate with the preservation of the root of the original word;

b) that in their own scientific and technical language new scientific and technical terms be taken over from other languages in the original form (or with as few modifications as possible) and definition, and at any rate preserving the root of the original word (as has been the case of curie, einstein, diesel, slalom, slang, sputnik, etc.)

c) (This section gives examples as a pattern for the adoption of new terms)

d) that the tradition of basing most new scientific and technical terms on Greek, Latin and Modern Latin roots be continued.»

As already stated, where danger to life and limb, health risks, etc. exist, such efforts are indeed worthwhile. However, this procedure can only apply to the academic world of science. It is unrealistic and impossible to implement in day-to-day industrial commercial practice from the point of view of competitiveness alone.

Consequently, many neologisms tend to be «spur-of-the-moment flashes of inspiration» which, later, very often even turn out to be counterproductive. Nevertheless, there is de facto a new term.

Even amongst existing terms, there are difficutlies for the unwary: the *correct* English equivalent of «fühlbare Wärme» is «*sensible heat*» (and not, as would be expected «*sensitive* heat»).

The English language is characterised by its conciseness and its ability to produce the right word to describe even the most complex and subtle ideas [4].

Examples of concise terms expressing complicated procedures and processes are:

- «hot connection»,
- «hot heel», and
- «software» (French: logiciel), and
- «hardware» (French: matériel).

In addition, imagery also plays a significant part. According to DUFF, the translator's job is to think *with* the author and not *for* him [5].

Completely new terms

As already stated, however, the greatest difficulty in industry is that the company's newest invention has to be «transferred» to another culture so that it can be sold there. (What do we call it in. . .?)

By way of illustration, I have brought along some examples of newly coined terms which are bound to cause the inexperienced translator or the translator without insider status or without at least access to insider information quite considerable difficulties at the very least.

Figure 1 shows a section view through an EBT furnace (Erkerofen).

Figure 2: The «nose» of the EBT furnace. This is the German «Erker».

Figure 3: The «nose» in its tilted position. This accounts for the term «hot heel».

Figure 4 shows the «hot connection». The Erkerofen (slag-free, eccentric bottom tapping furnace) allows hot charging using the hot heel method and direct rolling is possible following on from the continuous caster.

Figure 5 is another general view of a continuous caster exploded to show the passage of the hot steel through the caster. Continuous casting is one link in the «hot connection».

The starter bar, also known as the dummy bar (Anfahrbolzen; Spanish: la barra falsa (previously: el lingote falso); French: le mannequin) acts first of all as a dam in the mould to enable the strand to be formed at all and then serves to guide the strand through the caster. It is required at the beginning of continuous casting otherwise the liquid, i.e. molten metal would trickle straight through the mould without any means of control. The product which results is the strand itself (German: «Ader/Strang»; French: «barre» or, in some works, «boudin»; and «linea de colada» or «cuerda» in Spanish).

To demonstrate the dangers and pitfalls of the translation business there is one particularly good example: the bearing housing and the bearing bracket for a compressor.

The problem here is that «bearing housing» is the English equivalent of the German «Lagerbock» and «bearing bracket» is the equivalent of the German «Lagergehäuse» (cf API 617; API 672).

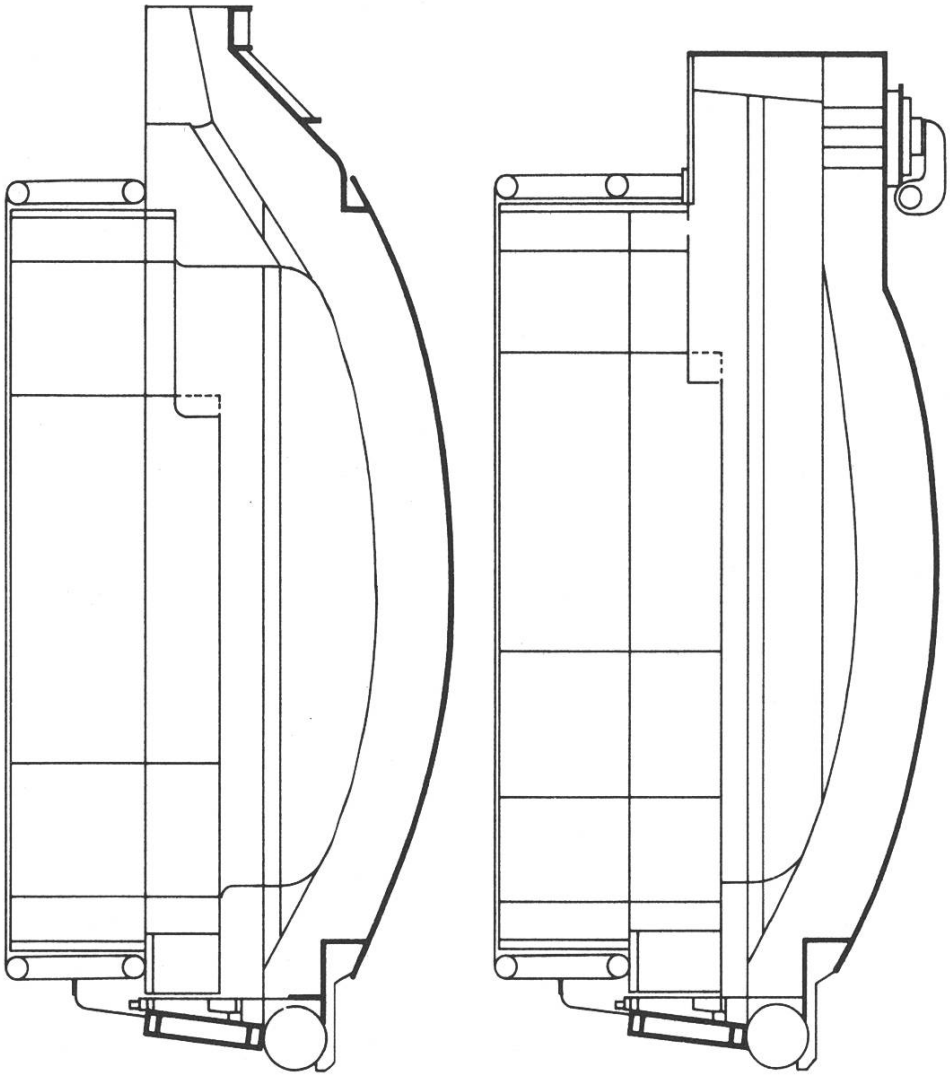

Figure 1

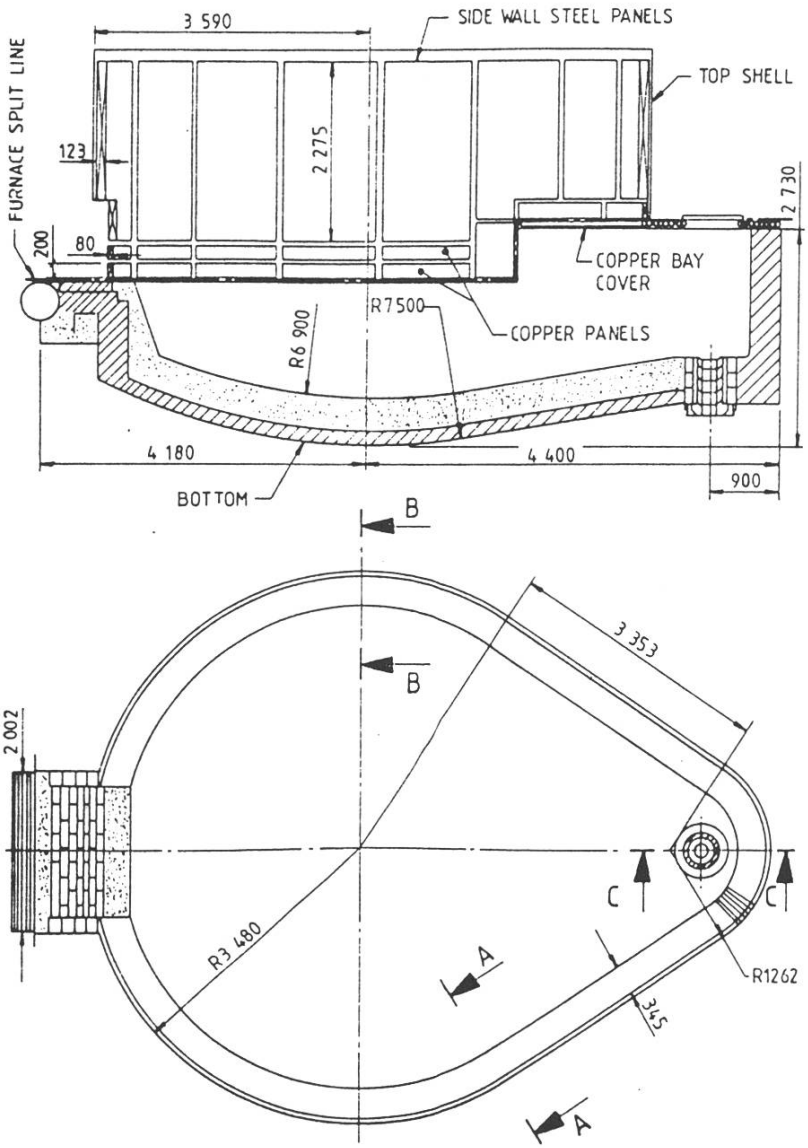
3 590
SIDE WALL STEEL PANELS
TOP SHELL
FURNACE SPLIT LINE
123
2 275
2 730
200
80
COPPER BAY COVER
R7500
COPPER PANELS
R6 900
4 180
4 400
900
BOTTOM
B
B
3 353
2 002
C
C
R3 480
A
R1262
345
A

Figure 2

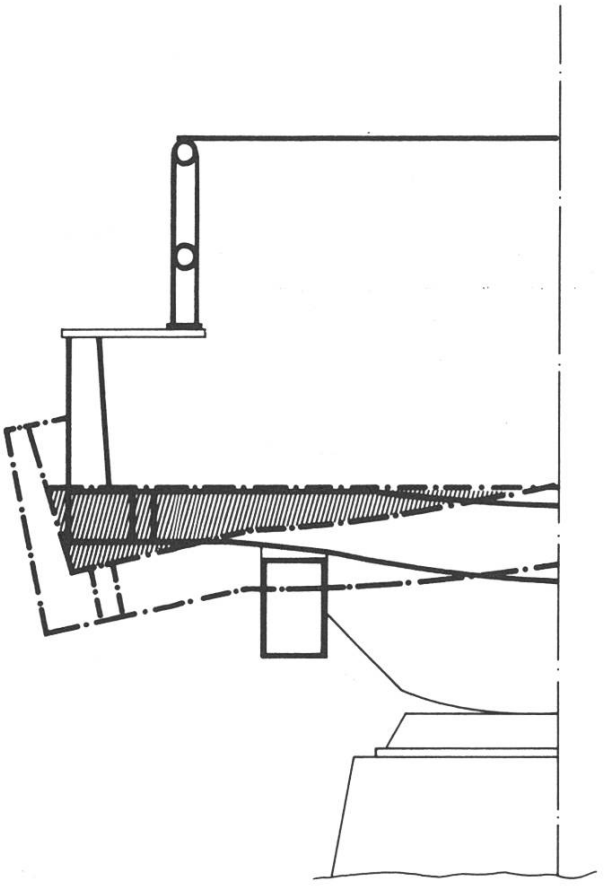

Figure 3

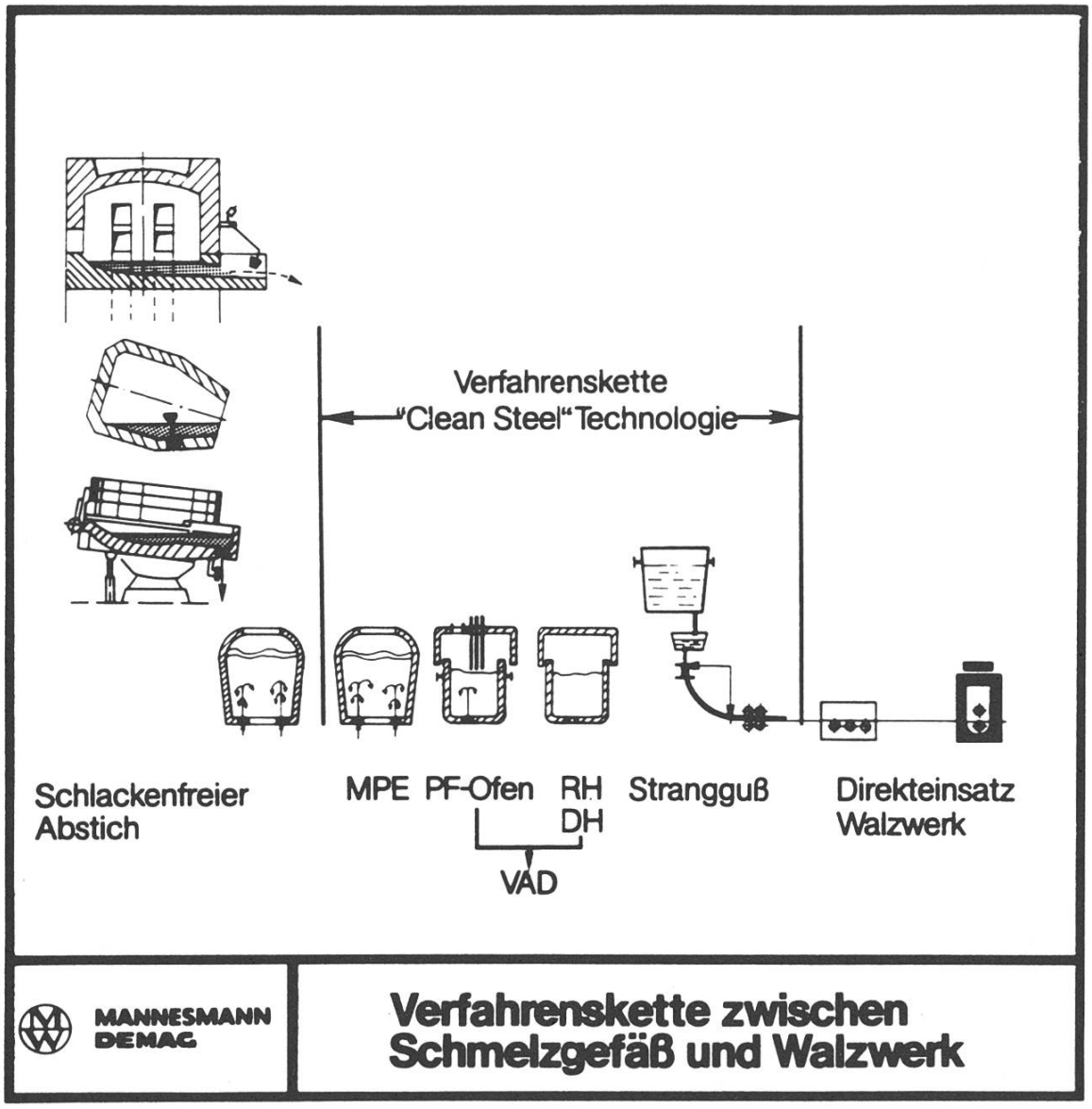
Verfahrenskette
"Clean Steel" Technologie
Schlackenfreier
Abstich
MPE
PF-Ofen
RH
DH
VAD
Strangguß
Direkteinsatz
Walzwerk
MANNESMANN
DEMAG
Verfahrenskette zwischen
Schmelzgefäß und Walzwerk

Figure 4

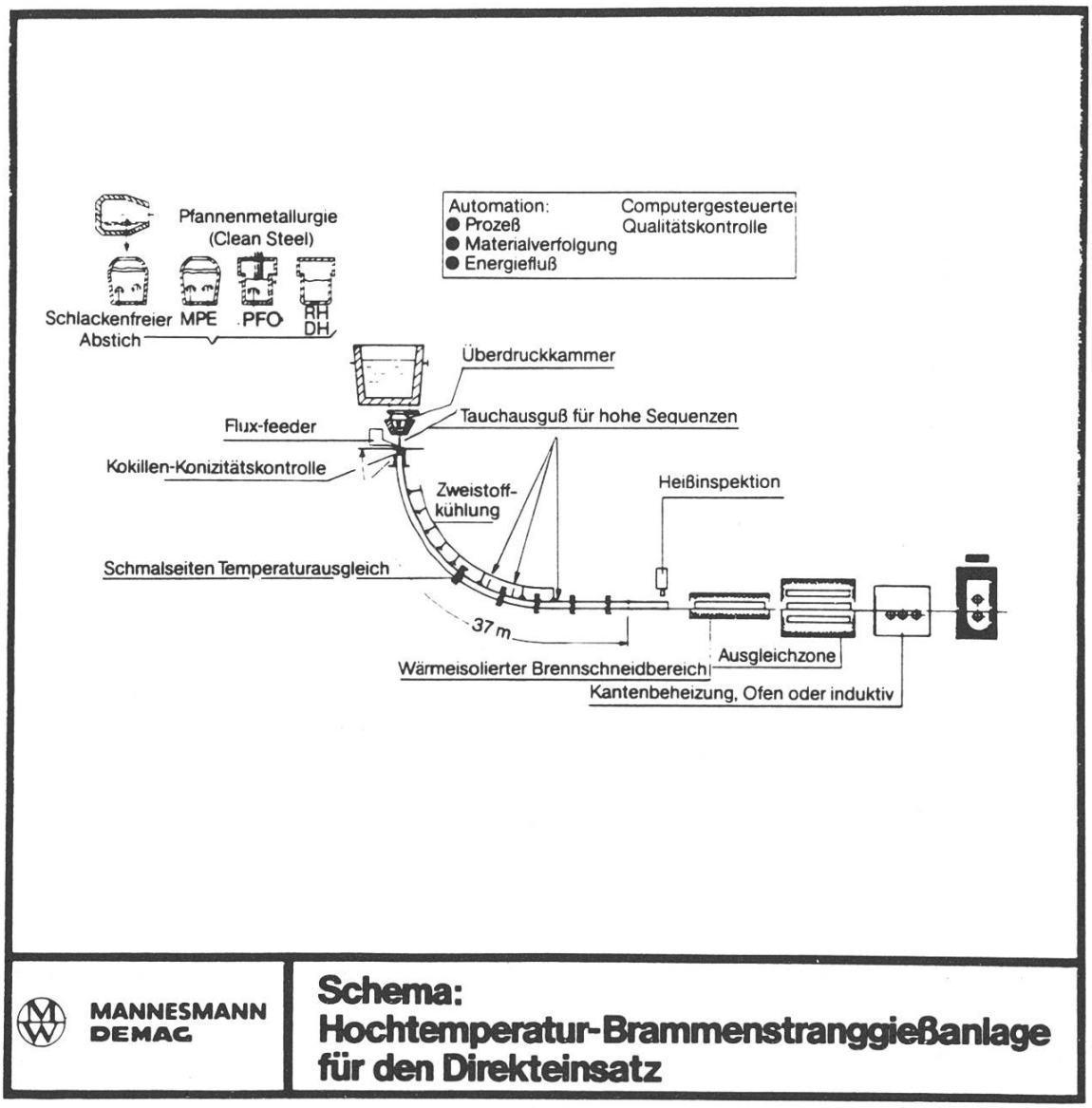

Figure 5

Here, we arrive at a new generation of «faux amis». And, with «friends» like these, who needs enemies?

If you add to these the poor quality of the SL text, the low educational level of some authors, etc., the rest is clear.

On top of this, to add insult to injury, there are some people who insist upon using their *own* terminology. A typical example is «automatisch induktivgesteuerte Flurförderzeuge» which, using the accepted technical equivalent in English, are «automated guided vehicles». A good sign of the fact that this term is correct is that it exists in abbreviated form: AGV's! However, the manufacturers absolutely insist upon calling them «smart trucks».

Generally speaking, if an old term is still serviceable, it should be used and reused until it no longer fits the bill before one goes over to neologisms [6]. Indeed, NEWMARK/FROST go one further: «the translator has *no right* to coin new terms unless he/she is also a member of an international glossary team [7, 8].

I am sure we are all of one accord in accepting the paramountcy of the equivalent effect principle (KOLLER, etc.) [9] and that the translator's responsibility is to render the text from SL to TL, retaining the information content in its entire integrity.

Nevertheless, it is this very search for the closest natural equivalent which is so troublesome. There are always situations in which the translator has no choice other than to «invent» a solution which will

- convey the same meaning,
- have the same impact,
- conjure up the same image,

and have the same «flavour» (Beigeschmack) as the original.

A tall order indeed.

It has often been said that the translator is an écrivain-manqué. I would suggest that the scientific and technical translator is very often a technical writer doué par excellence.

Difficulties involving existing terms

The trouble with «logic» and «inspired guesses» is that they are so often completely wrong.

In the processing of steel tube (e.g. for hydraulic telescopic tubing), the inside surface of the tube is machined – usually by honing or by roller burnishing.

The correct technical description for this procedure is: machining the «*inside diameter*» although, by its very definition, a diameter is an imaginary line and a tube is hollow.

Yet the abstract notion used here binds the process with the concept thereby rendering the sense clear for the technical expert.

This is also an example which can be directly translated: The German is «den Innendurchmesser honen/bearbeiten»

Another example: The term «Schlankheitsgrad» in relation to impeller blading in a mechanical engineering context caused us some difficulties. The translator found in the dictionary «slenderness ratio». The subject matter specialist, on the other hand, knew the term «aspect ratio». This term was not to be found in the dictionary but was verified by consulting the

NASA Handbook on Turbines (a manual which is now no longer obtainable). By checking these two terms against their SL originals in monolingual reference work (here Dubbel) and in TL monolingual reference works (here «Standard Handbook for Mechanical Engineers» and the «NASA Handbook») we obtain definitions which demonstrate that, in this instance, although the subject matter involved is mechanical engineering, the aerodynamic term «aspect ratio» is the correct term to use here. The «slenderness ratio» is an engineering term referring to structural engineering.

With some other terms, there is a state of anarchy in most dictionaries.

In general, abstract German nouns (ending in -ung) present difficulties in translation because they are used to describe *either* the abstract process (Kühlung, Heizung, Lüftung) *or* the device used to achieve this process. Indeed, it is no rare occurrence for both meanings to be implied in the one German term.

By way of example, let us look at the German terms «Möller» and «Möllerung» and compare them with their English equivalents «burden» and «burdening».

«Möllerung» is either «alles von den Rohstoffbunkern bis zur Möllergrube der älteren Hochöfen oder zum Begichtungsband der neueren Öfen», i.e. «the stockhouse between the stock bins and skip pit or charging conveyor» or «das Einfüllen des Einsatzgutes, Hochofenmöller genannt, aus den Bunkern und Erztaschen in die Transporteinrichtungen bis zu deren Entladung in die Gicht», i.e. «assembly and delivery of iron-bearing and fluxing materials».

The standard reference works state that «Möller» is «alle Einsatzstoffe für einen Hochofen *ohne den Koks*» (Lueger). The alleged counterpart in English «burden», however, is defined as «iron ore and flux *plus coke* in a blast furnace charge». In other words, the terms generally accepted as equivalents differ in their content. The solution we have adopted is to translate «Möller» in the blast furnace as «stock» and for the reduction furnace as «furnace mix burden».

The only way to ensure complete synonymity of terms is, therefore, to compare the monolingual definitions of the SL and TL terms concerned.

In passing, to get it off my chest, a lot of harm is also done through unprofessional practice by translators and/or dictionary compilers where insignificant attention is paid to differences in British English and American English terms which may differ in form although they are identical in meaning:

German	*British-English*	*American English*
Rückschlagventil	Non-return valve	Check valve
Schalldämpfer	Silencer	Muffler

I need hardly point out that such terms as «capacity» and «control» in English are much more often used than their German (or French) equivalents.

Translation problems caused by difference in system

Occasionally, the system involved is entirely different or has unique features: for example, the British and German accounting systems. In Britain, the accruals system is used whereas Germany uses the cumulative principle. It is only when the differences in system and practice are appreciated that one can begin to explain such terms as «Rechnungsabgrenzungsposten» or even «Lastenausgleich» as a unique feature of German accountancy. A standard feature of the German balance sheet is «Grundstücke und grundstücksgleiche Rechte». Under normal circumstances this can be translated into English as «Freehold and leasehold property» - a standard feature in an English balance sheet - for the average English-speaking consumer of translated accounts but *not* when the legal implications of the term (e.g. in a court case) are involved.

In the technical sector, taking rolling mills as an example, an entirely different philosophy comes into play when describing what happens when the rolling stock passes through the rolls. In German, the point of reference is the die, i.e. the groove cut in each roll (das Kaliber) whereas in English, the point of reference is the roll pass, i.e. the hole or clearance which is all that is left for the rolling stock to pass through when the rolls are closed. «Kalibrierung» is translated as «roll pass design».

The explanation of such terms often includes the use of neologisms or similar by the translator.

Old terms - New meaning

There is also the term which is being used in a novel manner. This can happen to such an extent that the «new» meaning totally eclipses the old one (e.g. «catholic», «pedestrian», «monolithic»). Resort is often made in advertising copy - particularly in USA - to the use of nouns as verbs to create a new «slant»: «How does this *impact* on the environment?» «Are you

parenting this child?» New meanings can also be conveyed by «adjusting» existing terms: «It is dangerous to *marginalize* those who do not wish to conform»; «This caravan *sleeps* four adults».

On the other hand, such solutions - cavalier though they may be by linguistic standards - frequently provide a very handy means avoiding cumbersome phrases - e.g. «serviceability, maintainability» - and also save space. Very often, more «punch» results.

The use of nouns as adjectives is also prevalent and offers the same advantages as «adjusting» the normal language norm: e.g. «motor car body accessories».

Non-equivalent frequency of usage

The principle of equivalent frequency of usage in source and target language applied to grammatical structures and lexis is particularly useful as an additional method of «verifying» a translation.

Take, for example, the German architectural term «Halle» for which the English equivalent is «hall» or «bay». Apart from «loading bay» (= «Ladebucht»), the term «bay» is seldom seen in English technical texts. On the other hand, German has, amongst others, «Werkshalle, Gießhalle, Lagerhalle», etc. as can be seen in virtually any technical description or text. The English word with the equivalent frequency of usage is «shop»: «workshop, roll shop, tool shop, etc.».

I.e., in English, the functions performed in the architectural location is described as opposed to the architectural location itself in German.

Conclusion

To quote Octavio Paz: «There is neither now nor will there ever be such a thing as a «Science of translation»; but, translation can and should be studied scientifically» [10].

Despite such learned opinion, I remain convinced that Newmark's proposition still holds good:

«Translation is and will always be a craft requiring a trained skill, continually renewed linguistic and non-linguistic knowledge and a great deal of flare and imagination as well as intelligence and *above all,* common sense».

Semantic translation is basically the work of *one* type of translator and is an *art.* Communicative translation - my daily bread if you will - is often the product of a translation team, and is a *craft* [11].

I am extremely grateful to the various departments of Mannesmann Demag AG, Duisburg, for the visual aids and for their permission to quote their texts here.

Thank you very much for your attention.

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