

Berghaus News

Traffic Technology • Light Innovation

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Traffic congress 2006

From 27 to 29 September, the Research Society for Roads and Traffic FGSV is holding the German Road and Traffic Congress 2006 in Karlsruhe.

The various lectures include traffic planning structures which are currently undergoing transformation, together with the further developed infrastructure management for national, state and local authorities. Lectures on the quality and safety of traffic management and on innovations for structural materials, construction methods and construction contracts round off the range of seminars.

This year again Peter Berghaus GmbH will be present with an information stand at the accompanying trade-fair attended by more than 100 exhibitors. Take a look at our new products, and make the most of this opportunity for personal talks. We look forward to your visit!

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INTERTRAFFIC – new mobile traffic signal



Successful show presentation of the new traffic signal system MPB 3200 in Amsterdam

INTERTRAFFIC 2006 in retrospect: The largest trade-fair for traffic technology and traffic safety in Amsterdam attracted around 23,890 visitors from no less than 110 countries. The international reputation of this leading world fair was supported by 690 exhibitors from 41 different countries.

The highlight of portable traffic signal systems at the INTERTRAFFIC was without doubt our new traffic signal system MPB 3200. Once again Peter Berghaus' policy of investing in innovative technology rather than in futuristic design has proven to be the better approach.

And so our new MPB 3200 offers many advantages compared to previous sys-

tems. Clearly organised controls and an informative function display make it easy for even inexperienced users to become familiar with the signal system technology simply at a glance. Without having to turn the signal head, the directional radar detectors can be aligned precisely to the traffic, at angles of up to even 270°. The heavy-duty antenna has been tared in a measuring field specially to the electrical counterweight of the traffic signal and is positioned freely on the highest point of the signal system. This maximises the outstanding range even further. The signal system also is available with a multi-frequency radio path as an option. At the request of our export customers, for the first time we have now been able

to equip MPB 3200 with an automatic changeover from radio/cable to quartz operation when there are transmission problems. This special version has been repeatedly demanded particularly by our customers in countries where only one single radio frequency is permitted. This option makes child's play of compensating for short-term transmission problems. And traffic continues to flow without any hindrance because the system changes over internally to quartz operation for the duration of the problem. In the background, MPB 3200 restores the original transmission mode and then switches back to regular operation. Companies working only sporadically abroad can activate this function themselves on request.

Basically MPB 3200 corresponds to type classes A, B and C of TL-LSA 97, depending on the chosen operating mode. When the automatic changeover is activated during transmission problems, the signal system in quartz mode then corresponds to type class A.

Proven, practice-tested cases in modular design minimise spare parts costs when repairs have to be carried out, because here really only the defective spare part has to be replaced.

Thanks to the compact design, a complete MPB 3200 system (consisting of two signal heads, two mobile aluminium casings with removable stand masts and four batteries 12 V/170 Ah) is easy to transport and can even be brought to the construction site in the back of an estate care. Cleverly thought-out technology from practitioners for practical use: safety first from Berghaus!



Compact bottleneck signal system MPB 3200: thanks to the modular design, the system can be transported quickly and easily in an estate care, even with four batteries.

New: Sign Scout, the practical aid for your pocket



Sign Scout makes sense of traffic signs: at a glance

Be quite honest, do you know every single traffic sign? Sure, the pictures and meanings of the most common signs are quite clear from daily use, but do we really also know the exact designation?

The new Sign Scout explains the German hazard warnings, directional/right of way signs, legal dos and don'ts and additional signs of the German traffic code with around 400 coloured illustrations numbered accordingly. But our pocket scout also helps you on your journey not only through the forest of traffic signs:

practical tips for stationary roadwork signs and for using mobile traffic signal systems in bottleneck situations supplement this 48-page brochure

Best of all, we can produce your very own personalised Sign Scout for you in quantities from 1,000 each with your company logo of course please ask for a quotation. This makes sure that your staff and customers can reply on the Sign Scout in future when driving through the forest of traffic signs.

2nd generation of concrete pedestals: for even more safety

With the second generation of overhead road cabling units by Peter Berghaus GmbH.

Remember? Twelve months ago our Berghaus News introduced a new aluminium design for temporary overhead road cabling units.

Our aim was to design an erection and overhead road cabling unit which stands very safely, is easy to erect and versatile in use. Prerequisite for the system's stability was initially the decision in favour of a concrete pedestal to meet the static demands. We opted



First generation aluminium round mast structure in concrete pedestals

for a block weighing 600 kg. The standing weight can be doubled quickly simply by stacking two blocks. This clearly organised system no longer needs the previous base plate support structure which had to be weighed down with a correspondingly large number of base plates. In the interests of versatile use, all our concrete pedestals are provided with slots for erecting a lattice mast. This universal system has been put to the test in practical conditions and is now used to cover many different applications for example, overhead road cabling units, masts for signal systems with arms out over the carriageway, stands for large-sized signs, floodlighting, and much more besides.

Our first generation of aluminium structures met and still meets with lively interest from a wide range of users.

To expand our product range even further and also handle enquiries for even larger erection systems, we have now

introduced a second generation to follow on from the proven system. In order to meet demands for structures capable of taking greater loads with even longer projections, the footprint of the concrete pedestal in the new system has been enlarged to 120 x 120 cm. In addition, the weight of the concrete pedestal has been increased to 1200 kg.

It goes without saying that the second generation of concrete pedestals still fulfils our versatility principle: here again, there are various openings in the top of the pedestals. The stand pipe diameters have been adjusted to the dimension of the larger concrete pedestal, to achieve a greater load rating here too. It is now possible to fit aluminium round tubes with a diameter of 140 mm in the middle and an 80 mm aluminium square tube on either side.

The concrete pedestals consist of filled, robust, galvanised frame structures providing special protection from impacts and damage at the edges. In spite of the high dead weight of 1200 kg, which is of course extremely useful in the

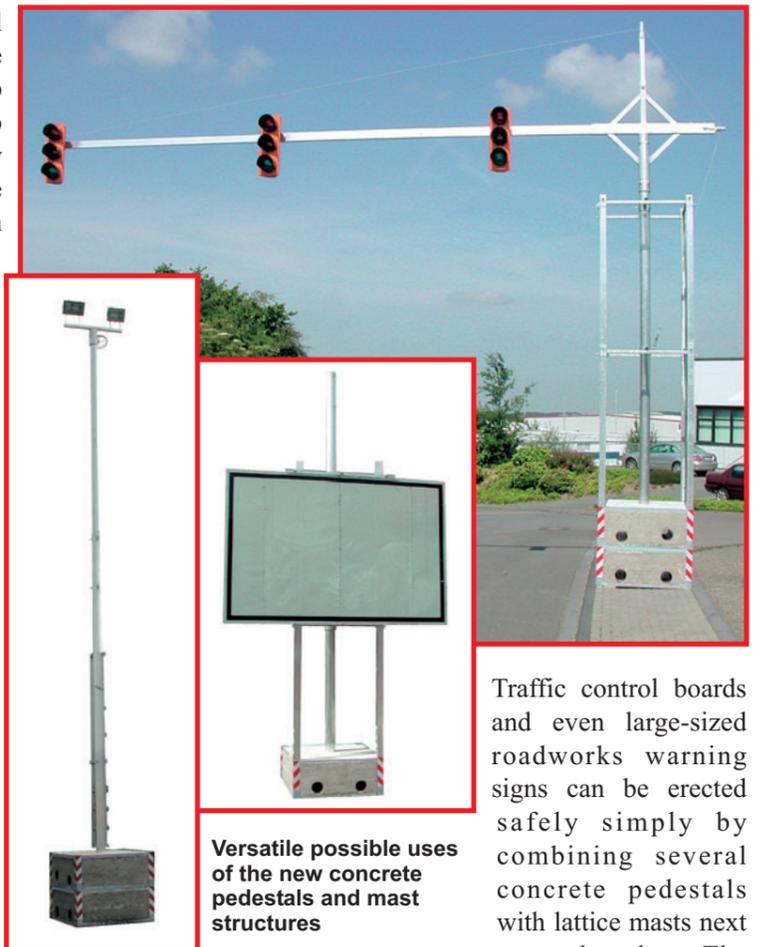


Second generation concrete pedestal with practical transport opening

interests of good stability, this is still no problem for transport. Our concrete pedestals have two round openings on the side for unloading with truck loading cranes using belt loops, chains or similar. On site, the pedestals can be transported easily with a forklift truck with the lateral round openings being specially rated for this purpose. That also makes it easy to

place several concrete pedestals on top of each other to increase stability even further. The new generation of concrete pedestals with their lattice and round mast structures is quickly and easily erected with extreme stability. This results in many possible applications. The greater weight of the new concrete pedestals means that they can also be used for longer arms for up to three signal heads erected

over the carriageway or for lane control signals with an illuminated cross for the motorway. The compact design also facilitates fast, space-saving erection of floodlight masts up to 10 m in height.



Versatile possible uses of the new concrete pedestals and mast structures

Traffic control boards and even large-sized roadworks warning signs can be erected safely simply by combining several concrete pedestals with lattice masts next to each other. The

second generation of our concrete pedestals offers many universal possibilities and can be used together with standard components to produce any number of new individual applications.

Traffic control boards in new design

With immediate effect, our proven traffic control boards made of light-weight yet highly stable 3 mm hard aluminium are now available in a new design. As hitherto, reinforced edges on the inside protect the board from damage. But the corners are now rounded with an opening: while maintaining greatest stability and distortion resistance, rainwater and dirt can now drain unhindered. There is no text on the boards which are covered only with white retroreflecting film type II (honeycomb pattern). They do have a black edging and can be used as the background for adhering films with corresponding diversi-



on and changed road layout texts.

The back is painted in grey (colour shade RAL 7043 as per DIN) as prescribed generally for traffic signs.

The traffic control boards are available in two sizes: 1250 x 1600 mm and 1250 x 2000 mm.

Together with the telescopic mast system specially designed to go with our boards, the traffic control boards can be erected quickly and simply by just one single worker.

The necessary stability for this size of traffic sign boards is achieved by using our TL-tested aluminium or steel erection devices which have proven their worth in practice.

Squib: fair comparison?

At a computer show (ComDex), Bill Gates compared the computer industry with the car industry, making the following statement:

"If General Motors had kept up with technology at the same rate as the computer industry, then today we would all be driving cars for 25 dollars which do 1,000 miles to the gallon".

As an answer, Mr. Welch in person from General Motors issued the following press statement:

"If General Motors had developed technology like Microsoft, then today we would all be driving cars with the following characteristics:

1. Your car would crash twice a day without any obvious reason.
2. Every time that they renew the road markings, you would have to buy a new car.
3. Occasionally your car would simply stop on the motorway without any obvious reason: you would just accept this, start it up again and continue your journey.
4. When trying to do a certain manoeuvre, such as a left-hand turn, the car would simply stop and refuse to start up again. You would have to reinstall the engine.
5. You could only sit in your car on your own, unless you had bought a "CarNT" or "CarXP". But even then, you would have to pay extra for every single seat.
6. Macintosh would make cars which run on solar energy, operate reliably, are five

times faster and twice as easy to run, but which could only be used on 5% of the road network.

7. The oil control lamp, the temperature and battery warning lamps would be replaced by a single warning lamp called "General car fault".

8. New seats would mean that all passengers would always have to have the same buttock size.

9. The Airbag system would ask for confirmation "Are you sure" before being triggered.

10. To park the vehicle, you would have to press the start button and the car would then shut down.

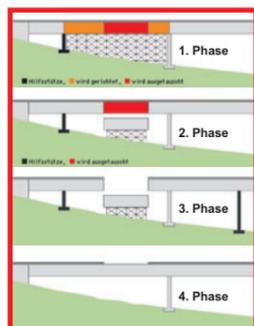
11. Occasionally, your car would simply lock you out without any obvious reason. You could only unlock it with a trick by pulling the door handle, turning the key and grasping the radio antenna with one hand, all at the same time.

12. General Motors would force you to buy a deluxe set of road maps by Rand McNally (a GM subsidiary) with every car, even if you do not need or want these maps. Failure to use this option would mean that your car would immediately become 50% slower. In addition, this would also make GM a target for legal investigations.

13. Whenever GM would present a new car, all drivers would have to learn to drive again, because none of the controls would work in the same way as in the previous vehicles..."

M+V GmbH: major diversion at the Wiehltal bridge

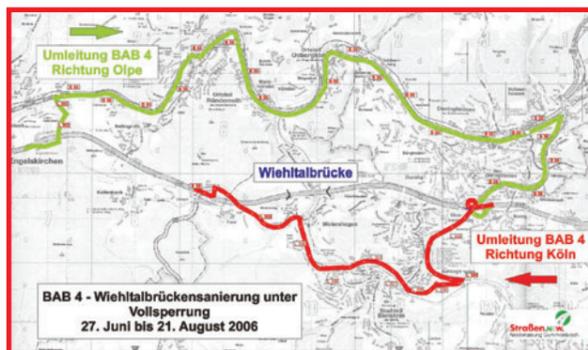
The Wiehltal bridge (German motorway A4, North Rhine Westphalia) is being closed completely from 28 June to 21 August. Following the severe damage to the bridge caused by a spectacular traffic accident with a tanker on 26 August 2004, a 20 m long element is being replaced now in four phases. To this end, the new



Pictures: Strassen.NRW

element is going to be mounted on a special structure below the bridge. The damaged element is then going to be cut out across the full width: for the first time in Germany, the

new section will then be raised and fitted into the bridge. The total costs for refurbishment and repair of the bridge which is altogether 705 m long amount to altogether around €7.2 million. In order to keep traffic going on this important East-West route between Cologne and Olpe, there will be an extensive traffic diversion, as was the case immediately after the accident. Our subsidiary, M+V GmbH, Kürten, has therefore been commissioned by the State Road Service of North Rhine Westphalia to erect traffic signal systems in addition to the diversion signs, to make the changed road layout even clearer. If the repairs are all carried



Extensive traffic diversion around the Wiehltal bridge

out according to plan, the bridge structure will be open for traffic again in both directions on 21 August.

More information and live pictures can be found on the internet at: www.strassen.nrw.de/projekte/a4-wiehltalbruecke/index.html.

New price list now presented

For purchase / rent / leasing

P.B.
P. BERGHAUS

Price list 2006

Traffic technology from one single source

With safety from Berghaus!

www.berghaus-verkehrstechnik.de mail@berghaus-verkehrstechnik.de

The latest price list for Peter Berghaus GmbH was presented in April. In accordance with the company slogan "Safety first from Berghaus", 64 colourful pages now present far more than 200 traffic system products with illustrated pictures and detailed information.

The extensive product range from the company's own production facility is constantly being supplemented with new innovative products, thanks to 45-years of experience at the service of traffic safety. This experience is also used to provide interested readers and customers with valuable practical tips for the product groups featured in the current price list, including Pioneering Light, Vehicle Safety Equipment, Mobile Warning Trailers, Portable Signal Systems, Erection Systems for Signs and Signal Systems, Height Warnings, Lighting, Maintenance Documentation, Directing Systems, Marking and Protection Units and Portable Steel Protective Walls.

The print version of the current price list in english can be requested free of charge or downloaded from the website www.berghaus-verkehrstechnik.de.

Safety nightmare: one-day motorway roadworks



Accidents involving mobile warning trailers: unfortunately, no rarity on our motorways. Picture: Archiv VDStra

One-day roadworks with mobile warning trailers are a vital element in the care and maintenance of German motorways. Mobile trailers and advance warning systems are also used when working on the shoulder and mowing the grass, for immediate measures following accidents, for safeguarding hazards or repairing carriageway and crash barriers. A large number of short-term safety measures are required every day on Germany's motorways.

The protection measures are set up according to the rules of the RSA 95. Most of the short-term traffic control measures are set up by the corresponding motorway maintenance department. But an increasing number of private contractors is also involved in the corresponding protection work. Unfortunately, short-term roadworks are frequently involved in accidents with the mobile warning trailers. The main causes of non-braked collisions are frequently overfatigue, driving too close to the car ahead or a lapse in concentration on the

part of the road users ("microsleep"). The dangers for the workers involved in setting up and running these day and night roadworks must not be underestimated. Accidents in such safety measures have a high damage rate. Unfortunately, workers involved in the actual roadworks and in protecting the site are injured and killed every year. Let alone all those workers who just manage to save themselves by leaping behind the crash barrier to avoid an accident. How much courage must it take to go back onto the motorway to carry on working after such a near miss? There are no statistics about staff traumatised in this way or how the colleagues of accident victims are affected. It is therefore extremely important for all known technically feasible measures to be taken to protect the workers and road users. Innovative ideas and products should be welcomed with possibilities for testing them on trial road sections. It will probably never be possible to completely prevent major traffic

accidents in roadwork areas, but the use of our new accident prewarning system (UVS) can make an active contribution to more safety for motorway maintenance staff, fitters and workers. The UVS consists of three components:

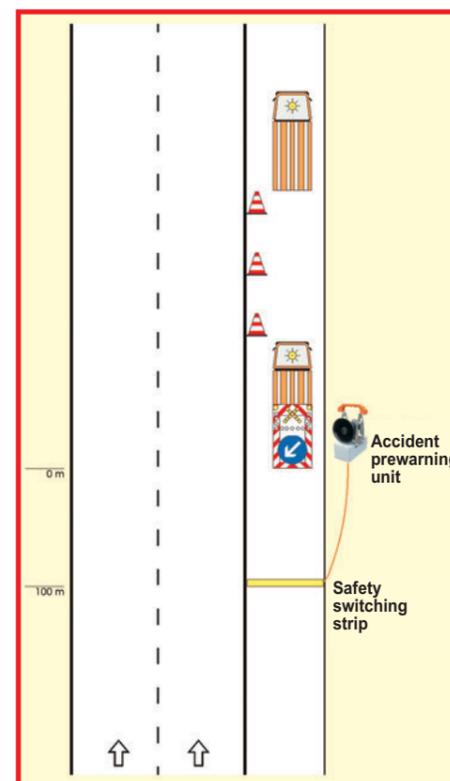
- the accident prewarning unit
- the safety switching strip
- the connecting lead

The safety switching strip weighs only 10 kg and is placed on the carriageway 100 m away from the mobile warning trailer. The strip is secured with an arrestor cable. The 4-wire connecting lead then connects the safety switching strip with the accident prewarning unit, which in turn is connected to the 12V power supply of the mobile warning trailer (see diagram). After the system has been connected up, a brief signal tone indicates that the accident pre-warning system is ready for use. A vehicle travelling at a constant speed of 80 km/h takes 4.5 seconds to cover a distance of 100 m. As it crosses the switching line, the vehicle triggers the loud siren on the mobile warning trailer. After subtracting the reaction time, the workers now have 4 seconds before the expected impact on the warning sign. Time to drop everything and get to safety behind the crash barrier, for example. Compared to other systems for preventing accidents at short-term road closures, this system can always be installed from the edge of the carriageway because only simple, safe handling warrants that the system will be used.

Take precautions and help to prevent severe injuries and deaths from becoming a routine side-effect of motorway protection work: your staff will be grateful! UVS – an acquisition for life!



Loud siren



Using the accident prewarning unit and the safety switching strip

Information about portable safety devices

Steel better than concrete – concrete better than steel?!

Meanwhile everyone involved in traffic safety measures knows that temporary road restraint systems of concrete and of steel each have their own justification on the bitterly fought market. This article does not look at the advantages or drawbacks of steel or concrete but explicitly illustrates how both systems are equally justified.

We all know the basis for the test criteria DIN 1317-1 and -2, we know the criteria for use according to ZTV-SA 97, and we know the technical delivery conditions TL for portable safety restraint systems. Even so, time and again, invitations to tender confront us with specifications for safety restraint systems which leave great scope for speculation. Frequently I come to the conclusion that as items are described in ever greater detail and road restraint systems specified with ever greater precision, it becomes increasingly impossible for the bidder to satisfy these requirements. The person issuing the invitation to tender firstly is not familiar with all the road restraint systems available on the market and secondly, some are also convinced that there is a difference between concrete and steel road restraint systems.

As mentioned at the beginning, I see concrete and steel as equals in terms of safety. I have seen invitations to tender demanding road restraint systems with the values H1 / W 6 but restricted by the remark that only a concrete road restraint system will be permitted for this project. This is a clear infringement against the equality of both systems. The specified requirement criteria are offered by both concrete and steel road restraint systems, so that restricting the specification to just one system is more than just a distortion of competition. Here once again in plain text, so that you can understand the test conditions and resulting results: imagine an impact test with a 10 ton truck. The truck drives into a road restraint system at a speed of 70 km/h and at an angle of 15°. What happens? The truck presses and pushes the concrete restraint system over a distance of nearly 210 cm! Now imagine another test under the same test conditions. Once again a truck drives into a temporary road

restraint system at 70 km/h, only this time the system is made of steel. What happens? This system is also pushed approx. 210 cm away. These 210 cm correspond to the effect range W6, i.e. exactly what the tender specification demands. The question now arises as to what is the difference between the two tests? I can only presume that the difference is in the mind of the person issuing the invitation to tender. Outside the pertinent and objective test criteria, DIN EN 1317 and the TL for portable road restraint systems, there must be a (prevailing public) opinion which groundlessly claims that concrete is simply better, without being able to provide any factual substantiation. Let us keep to the relevant test results. Emotional decisions must not query the technical test results of an accredited institute.

Finally, may I make this request to those issuing invitations to tender: ask the manufacturers or the BAST (German abbreviation for Federal Highway Research Institute) when you need advice on the product "portable road restraint systems".

Please find below a master specification test which, without making reference to a specific material or product, contains only the key criteria such as restraint level and effect range. Simply add the required erection length, intended provision period and an indication as to the area where the system is to be erected that's all! It can be so easy, says your Harry Lippert.

Master specification text				
No.	Description of the specific service	Quantity	Unit	Total amount in €
1.001	Erect mobile road restraint system Supply and mount mobile road restraint system with positive connection to existing crash barrier system DDS including adapters and fastening materials. Area of use "B" (see ZTV-SA table 5) Restraint level H1, tested as per DIN EN 1317-2/-1 by an acknowledged European testing institute, copy of the test certificate to be included. Effect range ≤ W 6 Reflector elements must be fitted every 1.5 m (2 on each side, reflection values min. 12 mod/lx). Directional traffic must be maintained while erecting and dismantling the system. Details in bidders list about: Manufacturer, make:	680	m
1.002	Convert road restraint system Convert mobile road restraint system as per item 1.001 from construction phase I to construction phase II without intermediate storage, otherwise as item 1	680	m
1.003	Provide road restraint system Provide 680 m mobile road restraint system for the items featured above. To be charged according to calendar day	90	d
1.004	Maintenance for road restraint system Maintenance for 680 m mobile steel road restraint system for the above items, including realignment and repairs following any accident damage. To be charged according to calendar day	90	d
1.005	Dismantle road restraint system Dismount mobile road restraint system as per item 1.001 after the end of the construction period including transport away from the site. Ownership of the road restraint system passes back to the contractor.	680	m
1.006	Clean the carriageway Clean the carriageway after dismantling the road restraint system. Ownership of the sweepings and refuse passes to the contractor. These must be removed from the site	1	m/flattrate

HARRY'S COLUMN

Do higher standard impact tests include all lower tests?

Impact tests are based on DIN EN 1317-1 and -2. This DIN standard includes the following remarkable NOTATION 2 under table 2: "A system tested successfully under a stated restraint level must be considered to be a system which has also fulfilled the test conditions of the lower group, which include N1 and N2 but not T3".



"Our super restraint system also covers H1/W2 or even worse T3/W1". This simply cannot be right in my opinion. It only seems logical to me for the lower restraint levels to be included for the same effect range!

To illustrate this, let us take a look at a practical example: A portable road restraint system is demanded with restraint level H1 and effect range W5, to protect a set of roadworks.

A company comes and says "These specifications are covered by my restraint system with values H2 / W7", referring to DIN EN 1317-2 and to notation 2.

This manufacturer has had a road restraint system successfully tested according to TB 51, corresponding to H2. This system achieved an effect range of W 7. Passing an H2 test entails a relatively high workload. This road restraint system must restrain a bus with a gross weight of 13 tons which drives against the road restraint system at an angle of 20°. It is definitely to the manufacturer's advantage if he has passed this test with his system and now only has to keep this one system available. Because this one test now automatically also covers all restraint levels below it according to H1, T3, N1, N2, T2 and T1. Sounds good!

But this is where I start to get doubts. Does this statement really comply with the quoted notation? The fact that the higher restraint stage of a road restraint system includes the lower levels is clearly understood, but I cannot understand how the effect range can be reduced from W7 to W5 as is the case here. Where are the limits here? In the worst case, the company could claim:

There is one (temporary) exception here: ZTV-SA grants the user the possibility of using a T3/W4 system instead of an H1/W6 system. Otherwise there are no regulations which permit the conversion of effective ranges into different restraint levels.

This has been confirmed by enquiries with the BAST.

Says your

Harry Lippert.

Any more questions?

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ERNENNUNG

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wurde vom Bundesverband Deutscher Sachverständiger und Fachgutachter e.V. zum

Sachverständigen für Arbeitsstellersicherung auf Straßen
ernannt.

Wir wünschen viel Erfolg!



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