

Berghaus-News

Verkehrstechnik · Lichtinnovationen

Issue 19

March/April 2005



Fachbetrieb und Mitglied im
Verein für Verkehrstechnik
und Verkehrssicherung e.V.



At a Glance

Contents Schedule

Page 2

- Our alternative:
Everything speaks for aluminum. Courage to the investment of new tool machines
- Now the following products are produced from aluminum:
- Undercarriage for traffic lights and sign stands

Page 3

- New solutions with
Full blockage of the highway!
- Our new height measuring system HM PB 12/230
- Training of the traffic light experts: Fit for the future
- Special offer: mobile floodlight trailer

Page 4

- Information about transportable protection equipment
- Harry's Column:
Please, be more critical!
- Working security with steel barrier systems



Page 2: Aluminum offers many advantages

Impressum

Publisher:

Peter Berghaus GmbH
Herrenhöhe 6
51515 Kürten-Herweg

Editor: Dieter Berghaus
51515 Kürten-Herweg
Text and Layout: Hans Kirch

Circulation:

45.000 copies in German
1.000 copies in English

Printed by: Druckerei Brocker
51515 Kürten-Dürscheid

Lots of steel handling companies are short to close.

The explosion of the steel prices becomes a vital menace for numerous enterprises of steel and metal-processing branch. During the next months threatens a lot of steel handling companies from. According to a survey of the economic federation steel and metal processing (WSM) there are 16 percent of 1500 questioned enterprises in acute insolvency danger. Every fourth steel and steel handling company of this group within the next six months is reckoned on the way to the district court.

The situation could still intensify. Especially small and middle enterprises suffer between one and 100 employees from the raw material crisis. They arrange the biggest group of the threatened firms with 30 percent.

Aggravatingly comes for the steel and steel handling companies that the steel prices will barely sink during the next months. One points out to the fact that this worldwide applies, because "the steel price increases showed no home-made but an international problem".

The German steel production went up in 2004 on the 20-annual high of 46.5 million metric tons. This corresponds to an increase of four percent towards the Year before. Nevertheless, in 2005 is not



to be counted on another increase of the production, because the German steel groups already labored with a capacity utilization of about 98 percent.

Worldwide the steel production will rise this year on more than billion metric tons. More than every fourth metric ton comes meanwhile from China.

The German enterprises Thyssen-Krupp

and Salzgitter which had registered last clear profit jumps would have profited not only from the risen prices. Rationalization programs have clearly reduced the expenses.

For the worldwide steel industry this year it is reckoned on further settlement of the market. This concerns above all the cheap stream countries USA and China.

MPB 3003: The simplest service

After the type classes TL B and C examined cable-steered or radio-steered signal system MPB 3003 is a portable arrangement for the one-way traffic at road construction places or bottlenecks.

With the construction of this arrangement dependent on traffic, we have laid special value on the simplest service. The adjusting of the signal arrangement for the operation dependent on traffic can be carried out in seconds on site by the operating staff. The technical equipment is optimum, nevertheless. The signal arrangement MPB 3003 consists from two 3-aspect signal heads.

These are produced from impact resistant and UV-continual polycarbonate. The control is in the green chamber; by the spring fastener, it is comfortably accessible and lockable. An infinitely variable adaptation of the luminosity of the signal heads to the surroundings brightness is reached by the automatic day/night adoption. The intervals of the accumulator changes can be

thereby extended by a multiple. The undercarriage was constructed suitably for two accumulators 12 V / 170 Ah. The arrangement can be also pursued by use of our mains appliance type N1 (Ord.-no. A 44000) with 230 V mains voltage.

Areas of application: the inexpensive signal arrangement can be pursued either as a radio communication system or as a cable arrangement. It is conceived for the regulation of alternating one-way traffic. The arrangement is standard with radar detector (direction-recognizing capture) for operation dependent on traffic (VA) equipped.

Modes of operation: automatic-fixed-time; automatic-green time lengthening; automatic-green on demand (requirement operation, basic position allred); manual operation; lamps off; amber flashing.

Serially are inserted: red light monitoring; green /green-monitoring; green status supervision; LED accumulatorstate, control announcement LED for radar detector; disturbance-LED (red lamp defective, green /green-interlock and cable or radio distance disturbed).



Steel: A letter to our readers

Very honored customer!

Daily in the media is to be read and to hear: "Steel becomes more expensive and more scarce". The report printed on top has brought us the change in thinking. It is the highest time to go new ways. Of this challenge, we have positioned ourselves. Our management has decided to change on solutions that are more inexpensive. It has come to the result that many of our steel products can be produced in future in aluminum. Besides, construction changes have become possible, which have surprised us.

The weight reduction by use of aluminum is so seriously that with the mounting the daily performance can be considerably increased. The workmen will recognize thankfully that they must work with building site equipment no more with the heavy iron constructions on the highway. If you have changed on our new systems first, you will find out that unexpected possibilities come up for further applications, which extend your scope of business.

To make the named sign-posting construction as well as the sign stands even more inexpensive and safer; we have to offer an alternative to the present steel constructions. We show the versatility of the applications to you on the next side.

Sincerely yours

Our alternative: Everything speaks for aluminum

Independent on steel price fluctuations we have reached by the rearrangement to aluminum products the most massive price lowering of our enterprise history. Now products are ready, which not only advantageously for the user, but are essentially more inexpensive, weight-diminished and friendlier to mounting. The product rearrangement of steel on aluminum required the accompanying new acquisitions:

Courage to the investment of new tools machines



Sweat arrangement



Punch



Bending machine

Aluminum is a silver white metal whose most excellent quality is its low weight; chem. mark Al, valence 3, ordinal 13, mass number 27, atomic weight 26.98, specific weight 2.7, glaze point 658 ° C, boiling point with 2400 ° C. The stability can be increased by suitable alloy with magnesium, copper, silicon, and zinc considerably. Here the use of the aluminum is based in the light-metal construction. The material is to be formed with moderate temperature very well. It can be pulled, punched, press and roll out. In the air, aluminum is continual. It does not rust, because it covers itself bit by bit with a thin oxide layer, which protects the being, lower metal against other attacks of the oxygen. This oxide layer gives to the aluminum blue-white, matt appearances.



Sheet bending machine



Guillotine shears

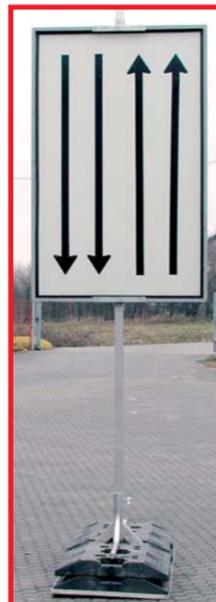
Now the following products are manufactured from aluminum:

Undercarriage for traffic lights

Considerable weight saving (20 kg opposite 50 kg) with identical stability. Improvement of the stability by the pullable stand feet. Stackable by taking away the standpipe. The complete signal system is transportable in small vehicles. For the export, savings are possible with the carriage costs!



A simple and favorable signs stand for sign combinations as for example no parking. This new "T-stand" is integrated into two base plates and reaches in this way an excellent stability.



Signs stand for 8 base plates (here with optional protection hanger for the base plate). Huge weight advantage by aluminum construction method (10 kg against 65 kg). Quicker construction (is to be carried from just one person).



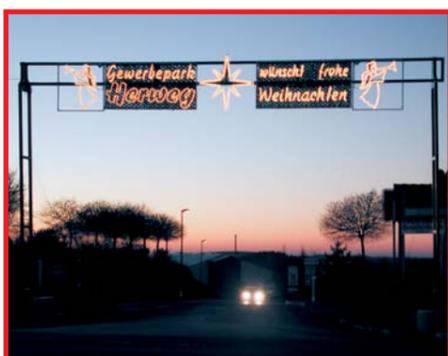
Mast for signal heads and cable crossings, here with additional horizontally pole for "over-street" signals.



Small base plate bearer from aluminum, e.g., for the city center as where place problems require small and safe stands. Ideally, e.g., for no parking sign posting.



Small execution for 60x60 mm poles. Application, e.g., for cable crossings by signal systems. Easier handling by weight advantage.



Here the portal shows a Christmas message to point out the industrial area to the passers, which is located behind it.



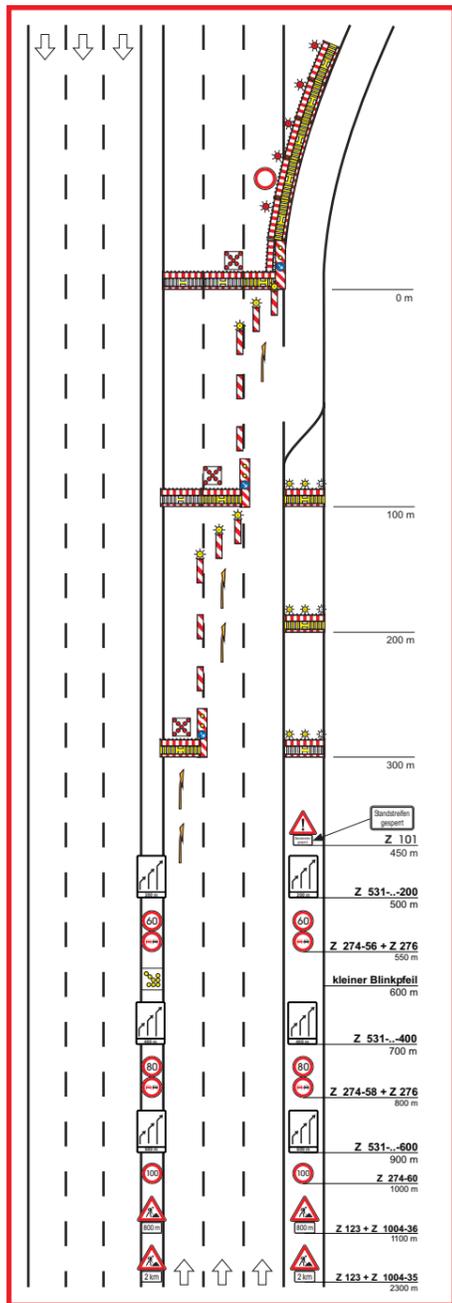
Two concrete base plates, two vertical poles, one horizontal pole, and the aluminum portal is ready for various applications.



It is hardly believable: Just one person can build up this horizontal mast with a way through height of 4,50 meters and a discharge of 6 meters. This is the great advantage of the use of aluminum.



New solutions with full blockage of the highway!



For the A 7 between the connection points Göttingen and Hann.-Münden field attempts were carried out with two full blockages with the new job fence. We spoke to the responsible service provider Mr. Werner Sporleder (B.A.S. Verkehrstechnik AG Hannover).

Question: Mr. Sporleder, why is it your opinion that a full blockage with the working fence is better than with the mobile stop boards?

H. Sp.: Side by side put up mobile stop boards show unsynchronized flashing signals and flash signals. The working fence in conjunction with a yellow flashing arrow and the 2.500 mm high light leading beacon (VZ 605-23) proves a clearer statement for the driver. In this matter it is on the agenda therefore to install, according to the red cross of the traffic influencing system (VBA) a red locking cross educated by nine beam lights on top of the working fence to the blockage of driving stripe in building sites. The driver thereby receives the identical signal picture.

Question: Have the regulations to be changed for this kind of the security?

H. Sp.: Almost all in the "guidelines for the safety at construction sites (RSA)" shown rule plans were constructed in 1979 - a quarter century ago-, namely based on the denomination named at that time in the StVO as "stop beacon". This concept has been already changed for many years in "leading beacon". Sloping stripes are basic a guiding device - a recommendation - and therefore juridical no barrier. Therefore, the StVO the road barrier changed in vertical stripes (Z600). These basic condition have not been changed in the rule plans, nevertheless, to

this day yet.

Question: How was the resonance in general after realization of the measure?

H. Sp.: Police, motorway master and road construction office were extremely contented in contrast to earlier blockages. They needed less staff and had less annoyance. Clearer traffic guidance was offered to the drivers, so that the traffic jam length became shorter.

Question: Which way of building sites should be, according to your opinion,

carried out with working fence in the future?

H. Sp.: Experts call this „ fence of the future “. Users chose the concept „ fence of the reason “ because it offers safety by the high visibility for all road users and on the building site to active persons and it is a calling card for the executive firm. It is to be assumed from the fact that the working fence will replace the present road barriers. This owns no sharp edges and does not rust. He consists of impact resistant, push-absorbing, brightly fully dyed plastic (HDPE) which offers at the same moment tension security, a good lifespan and is thereby more economic. The working fence fully fulfils to the slogan of the professional association: „Danger recognized-danger prevented.“



Our new height measuring system HM PB 12/230

Our new height measuring system was conceived especially for those areas with which it came up to now in the traffic as well as by disregard of heights and way through limitations to partially serious accidents.

The measuring system HM PB 12/230 with direction recognition, by using of two special light barriers, all oversized vehicles in direction of the traffic (bridge, underpass etc.). If a oversized vehicle is grasped, the system releases immediately an acoustic signal for five seconds. Furthermore, two signalheads (LED), set up in a distance of 30 Mtr. ahead, switches from yellow to longtime-red. The oversized vehicle is thereby stopped in time.

The reset of the system occurs by means of key or optional about time module (e.g. 30 seconds), on radio or SMS. The height

measuring system can be built up simply and fast with our mobile stand system at every place. The care tension occurs about 12 V accumulator or 230 V main voltage. The control is accommodated in a watertight case IP 66 and owns serially main to battery changeover, low-voltage and polarity reversal protection.

All parts, like light barriers, horn, signal head and key tracer are connected about watertight plug connectors IP 67.

A raised perception or attention of the road users is achieved by the introduction of a height measuring system with acoustic and optical signal unity. Accidents are nearly excluded. Areas of application for the height measuring system HM PB 12/230 are: underpasses, bridge building works, tunnel entrances, halls entrances or multistorey carpark entrances etc.

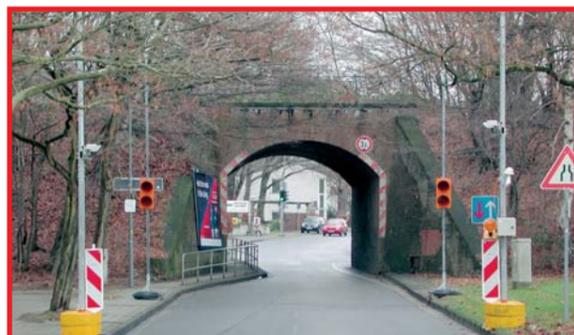
Technical data:

Care tension:
12 V DC and 230 V AC

Reach of her Light barrier:
0 to 60 m

Protection kind: IP 67

Equipment of the light barrier: front heating and weather protection bonnet.



Training of the traffic light experts: Fit for the future

For now ten years, the firm Peter Berghaus carries out two-second-day trainings for traffic light experts. In this time a total of just 1000 experts were trained by seminar leader Alfred Wurth and service engineer Uwe Banischewski.

According to education, status, two training programs were offered in January 2005. The main part of the training program 1 was the calculation of signal phase plans for alternating one-way traffic arrangements, the calculation of signal phase plans for t-junction and intersection signal arrangements as well and the use and service of the signal arrangement MPB 4000 (with the new



software). In the training program 2 the production of signal time plans with the traffic light plan program as well and the programming with the traffic light Win program were practicable for the intersection control devices EPB 6000-S, EPB 800, EPB 2400 and EPB-48. About 50 traffic light experts used the chance to qualify.

Special Offer: mobile floodlight on trailer



Used mobile floodlight, Type Hylite

- Construction year: 1992
- mounted on an admitted trailer
- Generator with diesel engine
- Floodlight: 4 x 1000 W of halogen, turnable at the masthead
- Telescope mast: 3-part, hydraulically extendably, height max. 9 m
- Masses in the operation: approx. 9 x 2,55 x 4,10 m (H, B, L)
- Masses with the transport: approx. 1,45 x 1,35 x 3,27 m (H, B, L)
- Price: 4.500 € + VAT

Information about transportable protection equipment

Working security with steel barrier system

A consequent conversion of the ZTV-SA is a life insurance for the asphalt- or bridge building worker.

In the ZTV-SA is shown in the picture 2 the application by protection walls. The area "B" shows the "separation" between building site area and highway. We want to look at this "separation" a little nearer. In the table 5 to the prename picture it is declared which protection wall should be put up in the area "B" as a function of the traffic guidance. Simply explained, if only passenger cars go near this separation, a smaller protection equipment like T1 will do it. If also trucks drive there, a higher-level protection wall with at least T3 is demanded.

Your working environment!

But this only still says nothing about the security behind the wall. Those, which must work in the building site area, will feel safe (subjectively). Because the protection equipment shows optically a more or less massive separation (according to wall type). If we look again in the table 5 in our ZTV-SA, there we see a fissure for the working width with the relative statement: Local conformity $\leq W8$. Here you must lay a special attention. Behind the wall is your working environment. This is used as a material-depot; here stands scaffolding for the bridge to be built a new. This area is used as construction roads. Here are workers and machines in motion. The working width says us how much place must be behind a protection wall, so that the wall can move itself with a vehicle collision.

Working width!

A truck crashes against the protection equipment, shifts the wall and presses this in the barred area, thus where is worked, where you are, where the scaffolding stands etc. As far the wall is shifted, depends on collision intensity and put up system. Because the protection system must prove its strength with a collision test, we know (can be read up in the test report) as the wall would have to react. The area in which the wall moves in, is called "working width" and is divided into classes of W1 to W8. Behind these names are information in meter of W1 = 0,6 up to W8 = 3,5 m. How this can look in the practice, shows the accompanying drawing.

You will recognize that the "working width" is an important factor for your workroom in which you move - a factor of vital importance. Here the announcing

authority must already perform a good preliminary work. It may not be that is found out during the execution of construction, that the place is not sufficient behind the protection equipment and the persons active there can move not certainly. Just looks the drawing.

Your security!

Very often, we find in the tender demands for protection walls with the working width W 8. Does this enormous needed place really exist? Can be worked here with the compulsory security for person and material? Not that now you think, then, nevertheless, that should write out generally a smaller working width and already there can be no more problems on the building sites. Only, here physics does not play. In the teamwork of protection equipment, vehicle and speed, different working width arise according to wall type. The wall is shifted more or less far. A deflection in the area of W1 (corresponds to 0,6 m), unfortunately, there is not at the market. A working width of W8 is not probably that what is to be realized on the building sites from the place. The areas, which are to be realized, lay between W5 and W3 and a wall with T3 / W4 has found itself as optimum. Walls with the containment level H1 lay here between W5 and W7. The ZTV-SA makes no difference between concrete and steel barrier system. In addition, this article is to be understood thus seen neutrally. It is here about your security, you as an asphalt- and bridge building worker move in the area, which is endangered.

A stable steel barrier system with a realistic working width is your best life insurance!

HARRY'S COLUMN

Please, be more critical!

If I drive thus above our highways and look the protection walls which stand there and then compare it with the known demands in the tender, my hair stands on end. I state that I know all protection walls, which there



are at the market. In addition, I have looked their test reports and have studied them. About their conversion, however, I am horrified. The walls, which would have to be screwed, are built up with plugs not examined for this containment level (so-called quick-connectors). Kipping-length limitation elements are integrated in systems, which were not checked in the group. The walls that would have to have all two meters a stand, have these necessary props only all four meters. Where T3 / W4 is written out, a wall with T3 / W5 stands, sometimes even a T1-wall! Different wall systems are screwed together without attention of the least length. Walls have none or too little reflectors. (Even the mark necessary then before the wall is missing.)

We could enumerate absolutely even more. However, I might give

only some tips to open your eyes for these problems. Talk yourselves into nothing, but examine and inspect properly. Only with the help of the test reports (I say intentionally test reports!) you cannot

judge a wall (the BASt acknowledge-documents contained often enough information). Criteria are the kind of the connection of the single elements, the construction as such, how many stands are right in which distances. In addition, the material strength is decisive for a system.

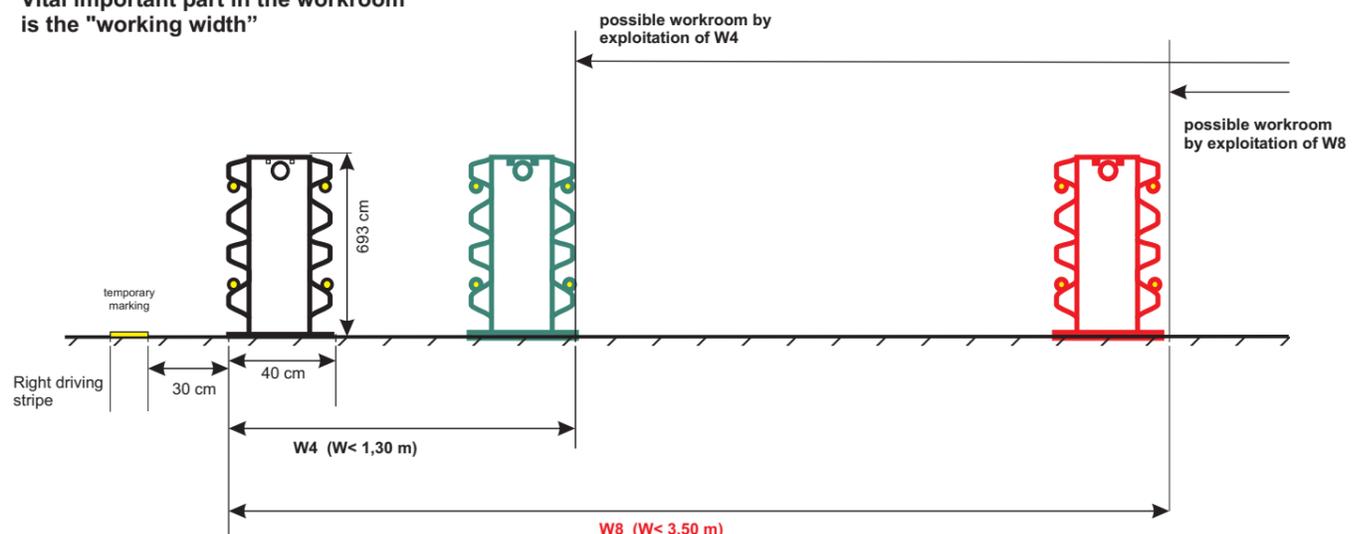
Unfortunately, every system is just as good as the visual control. Please, remain critical!



You still have questions?

And so you could reach me:
e-mail: lippert@stahlschutzwaende.de
or Phone: +49 2207 9677-15
or Fax: +49 2207 9677-80

Vital important part in the workroom is the "working width"



Peter Berghaus GmbH

Verkehrstechnik · Lichtinnovationen

Herrenhöhe 6 · 51515 Kürten-Herweg · Phone +49 22079677- 0 · Fax +49 22079677- 80

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