

Members Meeting 2017
Marc Schnau elected as new President

Leading Article - HDD
Responsibilities to Third Parties

22nd DCA Annual Congress
Podiumdiscussion - "HDD
Trouble-shooting"

DCA **DCA**
Newsletter July 2017



DCA Annual Congress 2017
22nd Annual Congress in Dordrecht,
Netherlands

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Impress

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Marc Schnau
President of the DCA



Dear members and friends of the DCA,

First of all let me thank you that you elected me president of the DCA at the members' meeting on February 08, 2017, placing your trust into me.

To me it is a major privilege and challenge at the same time, to represent the interest of the HDD industry and to actively shape DCA's future and the technology together with you.

The members' meeting already stated that Hermann Lübbers had put his house in order before handing it over. Special thanks from all of us go to him for his exceptional commitment and all the work he rendered for the association.

In the meantime the newly-elected board resumed its work; intensive and vivid discussions brought new ideas and questioned one or the other routine. For example are we tackling the idea to offer training courses free of charge for members in form of a one-day seminar. As soon as we have the facts we will inform you.

We are trying to create a kind of failure management - within the HDD industry, or at least within the DCA. Failure does not (necessarily) mean lack of performance of one of the parties involved, however; rather we understand it as deviation from the original plan. False estimations and misinterpretations (for example in geology) are also relevant of course.

We drilling contractors all know what unplanned and unwanted incidents might occur during a drilling performance that complicate the work or cause extra costs: loss of drilling fluids, blowouts, breaking bars, tool wear ... to name just a few. Where possible we prefer to keep these experiences to ourselves. Finally there is always someone smarter afterwards who knows how it had better be done. Or the experiences made are seen as advantage in competition and thus well treasured.

But instead we should increasingly and together avail ourselves of just these experiences; then we can effectively augment the quality and reliability of the entire HDD method. Finally we are all together competing both with conventional pipe laying and with other trenchless construction methods.

Let us together work on promoting the HDD method as future No. 1 of trenchless pipe laying. For that reason our annual congress will be held under the title "HDD first" from October 04-06, 2017 in Dordrecht (NL).

Currently we are intensely working to prepare the programme, and I can assure you already that we will make interesting first steps into this transparent and honest failure management for example.

I wish us all a beautiful summer, successful in terms of drilling contracts, and maybe you will find the time for some relaxing holidays. I am looking forward to a regular and constructive exchange of views with all of you.

"You can avoid mistakes if you gain experiences. And you gain experiences if you make mistakes" (Laurence Johnston Peter (1919-1990), Canadian-American management consultant)

Your President

Marc Schnau

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Panel discussion at the IRO in Oldenburg

Dr. Bertram (Lower Saxony Ministry of the Environment) lectures on the topic of disposal and recycling of drilling and drilling fluids

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Members Meeting 2017

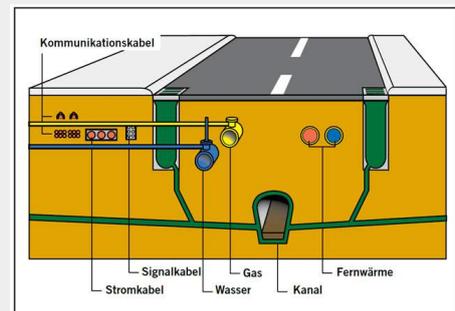
Hermann Lübbers handed over the captain's baton to the new president

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Social program of 22nd Annual Congress

This year also an attractive accompanying program with a visit to the world heritage Kinderdijk and a workshop in a distillery will be held at the congress.

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**Annual congress 2017**

The congress takes place from 4th to 6th of October at hotel van der Valk in Dordrecht.
Panel discussion on the subject "trouble shooting"

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**Prior notice 2018**

DCA expands education and training program for members.

Pilot seminar starts on 18th of January 2018 in Essen at DCA member Open Grid Europe GmbH

Please note this date!

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Review Members Meeting 2017

DCA's Members' Meeting

Changeover in the Association's Board

The changeover in the association's board took centre stage at this year's members meeting. The outgoing president Hermann Lübbers symbolically handed over the captain's armband to Marc Schnau who just was elected into the association's most important function without a dissentient vote



Hermann Lübbers handed over the captain's baton to Marc Schnau

Hermann Lübbers was among those initiating that the DCA was founded 24 years ago. Since then he has been fully committed and always in the first row for the association's interests - for the last ten years as president. His great dedication has been contributing a lot developing DCA's profile and adding weight to DCA's voice in the world of associations and authorities.



Time to say goodbye

Among the greatest achievements of Hermann Lübbers are the development of DVGW's worksheets GW 321 and GW 329 (for supervisors and skilled staff at HDD drillings) and the certifications related to these. This measure set a milestone in DCA's history, just like the introduction of own DIN standards for HDD drillings braced in the VOB did.



Thanks to farewell: Marc Schnau, Hermann Lübbers und Dietmar Quante (left to right).

After having been active in the DCA for 24 years and ten years functioning as its president, Hermann Lübbers was no longer available to run for office this year. After his moving farewell speech the more than 90 participants of the members meeting recognised his achievements by standing ovations.



Standing ovations

And then the members meeting unanimously elected Marc Schnau as new president. He has more than 15 years of professional experience with the directional horizontal drilling technology and is a recognised and esteemed expert in this field of industry.

Marc Schnau has been board member since 2010 and was responsible for the care of members of the association until 2015. During this time he was also in charge of the task groups "Model service specifications for directional horizontal drillings" and "Compilation of DCA's publications in a complete work". Based on the results of the last one, he strongly collaborated in formulating the 4th edition of DCA's Technical Guidelines that is currently available in three languages. The members meeting in February 2016 elected him vice-president of the association. Then he also assumed charge of the task group "Coating quality".



Marc Schnau new president

Schnau announced that he was willing to keep pursuing DCA's course hitherto; he wanted to be geared to the current and future challenges of this field of industry. One focus of the future work was the educational training of the drilling staff. "It is a great duty for all of us to introduce and educate young talents to the HDD industry", stated DCA's new president. "Since there is no recognised occupation as HDD skilled worker requiring formal training, we are more or less reliant on newcomers from a different profession. Given the ignorance about the facets of the work in the HDD industry, a lot of motivation has to be triggered here." Another emphasis would be put onto taking on current develop-

ments and deducing measures from these. "Presently the problems of handling the disposal of drilling fluids is the biggest issue of all," said Schnau. "The DCA, too, cannot provide pat answers in such cases. But we can initiate the necessary talks and then channel them."

After the president's election the following other DCA members were elected or confirmed as board members:

Vice-president

Jorn
Stoelinga



Visser
&
Smit Hanab
b.v.

Quality assurance

Dr. Tim
Jaguttis



de la Motte
& Partner

Public relations

Marco
Reinhard



Leonhard
Weiss
GmbH &
Co. KG

Traning and further education

Ernst
Fengler



LMR
Drilling
GmbH

The prospects for 2017 not only hold courses of training and further education ready but also the annual congress in autumn as highlight. From October 04 - 06 the field of industry will meet in Dordrecht in the Netherlands. Some people are already intensively working to prepare an interesting and attractive programme.

A.Eulenburg, bi

Marc Schnau of Bohlen & Doyen GmbH becomes DCA's new president

The members' meeting of the Drilling Contractors Association DCA was duly held in Oldenburg on February 8, 2017.

Elected as new president of the DCA was Mr



Dipl.-Ing. (FH) Marc Schnau

coming from the company Bohlen & Doyen GmbH. He has more than 15 years of professional experience in the field of horizontal directional drilling and is a recognised and esteemed expert of the industry.

Marc Schnau has been a member of DCA's board since 2010; until 2015 he was responsible for the care of the association's members. During this period he also functioned as head of the task groups "model bill of quantities for horizontal directional drillings" and "compilation of DCA's publications in a complete work". Basing on the findings of this last mentioned task group, he contributed a lot when the fourth edition of DCA's Technical Guidelines were formulated; they are presently available in three languages. He had been elected vice-president of the association at the members' meeting in 2016. Additionally he assumed the role of head of the task group "coating quality".

In his inaugural address the new president announced that all previous objectives of the DCA shall be actively pursued in future. Apart from promoting measures for training and further education of qualified drill staff, the DCA will continue providing and developing technical standards and recommendations. On a European level the interests of all members shall be pooled; thus the lobby of the HDD industry can be improved in the public or facing clients and authorities. The DCA will support or initiate measures that further develop the technique, enhance the quality, and coordinate the conditions of contracts and competition.

D. Quante, DCA



The new DCA-Board
(F.-J. Kissing is missing)



The "New" und der "Old one"

Review Members Meeting 2017

Farewell to Hermann Lübbers

Dipl.-Ing (EWE) Hermann Lübbers, one of those with initiative founding the DCA bows out in Oldenburg after ten years of presidency



In the course of the members meeting of the Drilling Contractors Association DCA in Oldenburg at the beginning of this year's February, and after 10 years as president and 24 years of continuous work in DCA's board, Hermann Lübbers handed over the sceptre to the next president Marc Schnau of Bohlen & Doyen GmbH. In a moving speech he bid farewell to board and members who recognised his achievements with standing ovations after his statement.

At the end of 1993, Hermann Lübbers and Dr. Rüdiger Kögler had developed the idea of founding an association for the directional horizontal drilling technology. On November 10, 1993 the first official meeting of the task group "directional horizontal drilling" was held in Wallenhorst at Hotel Bitter. The agenda of this meeting listed under item 3 "idea and reason of this event", "explaining, editing and putting on a common footing the general aspects appealing to all drilling contractors alike". Specified as examples are

- Proposal specifications for HDD
- Regulations for soil risks
- Undercrossing of railway tracks of DB/DR (approvals)
- Problems with disposal of drilling suspensions

These are tasks that lost none of their topicality. That meeting was followed by a number of other meetings of the task group and finally resulted in the foundation of the Drilling Contractors Association DCA on December 01, 1994.

The newly founded association had its first board meeting, Claus Schmidt who already departed unfortunately was the first president, and Hermann Lübbers assumed office as secretary. The formulation of DCA's first Technical Guidelines in German and English and the organisation of the Aachen office also fall into this starting period.

When Hans Ringers was elected president in 1997, Hermann Lübbers became vice-president and was significantly involved when the first drillmaster and foreman courses were realised in Celle. He also had a leading role establishing a standard display for HDD drillings.

But as vice-president he really put emphasis on developing DVGW's worksheets GW 321 and GW 329 (for supervisors and skilled staff at HDD drillings), and later on the certifications related to these. This measure at that time was one, if not the milestone in view of quality protection in DCA's history. For the first time minimum standards could be put into effect in this industry in the course of certification.

In the years between 2002 and 2006, during the presidency of Gerard P. Hoogveld, as well regrettably deceased, the focus was on training and further education of the staff working on the device, as well as the sponsorship of young academics of the industry.

The members meeting in 2007 then elected Hermann Lübbers 4th president of the DCA. During his term of office the Technical Guidelines were completely revised twice and considerably expanded. The last and topical edition was published under his direction in three languages in 2015.

Representatively for all the other objectives that were achieved stands the implementation of own DIN standards for HDD drillings.

It is primarily due to Hermann Lübbers that the new DIN standards overcame so many obstacles within the shortest time possible. Furthermore he could achieve that the DCA as association was specifically mentioned in the VOB; only very few others ever succeeded in that.

Hermann Lübbers will remain in close connection with the DCA in future. In agreement with the new board he will continue his activities in terms of training and further education for the time being. This applies primarily to the HDD training for supervisors, site managers and machine operators at Bohrmeisterschule Celle, and the further education according to GW 329 in Kassel.

The association wishes Hermann Lübbers all the best for his future!

D.Quante, DCA

Introduction of Ernst Fengler, LMR Drilling

I was born in 1969 in Wuppertal and grew up in Düsseldorf. After finishing school, I trained as a carpenter. Later, Civil Engineering studies guided me to Oldenburg.



While specializing in marine construction, I was introduced to HDD through Professor Lenz and the IRO in 1994. Since then, this technique has become a major focus of my life.

After finishing Civil Engineering, I worked with the IRO, which led to my initial employment with LMR in 1997 managing projects and job sites outside of Germany.

In 1999, I moved to Mönchengladbach to gain a second university degree in Business Administration. In 2001, I joined an engineering consultancy firm specialising in development and aid projects, where I was responsible for the supervision, control and acquisition of infrastructure projects in the Baltic and Balkan countries, as well as school building projects in Palestine.

Later, in 2004, an opportunity arose for my return to LMR, which I gladly accepted. I became Managing Director of LMR in 2016.

E.Fengler, LMR Drilling

31st Oldenburg Pipe Forum

Many visitors came to HDD lectures, panel discussion and DCA's stand

The event of the Oldenburg Pipe Forum presented itself to its visitors for the 31st time by now this year. The motto of this year's forum was "Pipelines in digital working worlds" and was reflected in numerous lectures in the familiar ambience in Oldenburg from February 09-10, 2017.

Like every year, the DCA had organised two blocks of lectures. Block 1, presented by Hermann Lübbers, came up with three interesting lectures. First Mr. Jorn Stoelinga of Visser & Smit Hanab b.v. in Papendrecht, the Netherlands reported about the project "Nothing is more persistent than change - landing drilling on Cyprus". It was followed by the lecture of Dr. Michael Neupert of Kümmerlein, Simon & Partner Rechtsanwälte mbB, Essen (lawyers) about the really topical issue "Handling used drilling fluids". Afterwards Dipl.-Ing. (FH) Marc Schnau of Bohlen & Doyen GmbH, Wiesmoor informed about "Horizontal casing drilling (HCD) - modification of the HDD method to driving steel protecting pipes".

The ensuing Block 2 was presented by DCA's board member Franz-Josef Kissing of Open Grid Europe GmbH in Essen and also had three lectures. The project "Limits of the technique of directional, horizontal drillings HDD - the engineer as agent between wish and feasibility" was introduced by Dr.-Ing. Tim Jaguttis. Then followed a lecture about "Responsibilities of HDD drilling companies towards third parties during performing a HDD measure", presented by

DCA's board member Marco Reinhard of Leonhard Weiss GmbH & Co. KG. Concluding Dr. Thomas Löffler of DENSO GmbH furnished information about "High Performance Coatings for Horizontal Directional Drilling (HDD)". Like in the past years the lectures attracted many listeners and generally met with great approval.

At the instigation of the DCA, a panel discussion about the topical issue "What to do with bentonite suspensions?", hosted by DCA's president Dipl.-Ing. (FH) Marc Schnau of Bohlen & Doyen in Wiesmoor, took place on Thursday afternoon and was very well atten-



Drilling Saloon

ded. Members of the panel were for example MR (undersecretary) Dr.-Ing. Heinz-Ulrich Bertram of the Niedersächsisches Ministerium für Umwelt, Energie und Klimaschutz in Hannover (Lower-Saxon Ministry for the Environment, Energy and Climate Protection), Dipl.-Ing. Michael Bijok of EWE NETZ GmbH, Dipl.-Geol. Björn de la Motte of de la Motte & Partner GmbH in Reinbek, Dipl.-Ing. (FH) Edgar Mrotzek of Bohlen & Doyen GmbH and Hans-Dieter Schulte of Westnetz GmbH (quod vide separate report).

Both traditional and popular, the Drilling Saloon of the DCA experienced bustling activities again. Many visitors enjoyed a chilly beer and delicious snacks during their professional talks. The casual atmosphere helped a lot to start conversations.

D.Quante, DCA

Review Panel Discussion IRO 2017

Panel Discussion at the 31st Oldenburg Pipe Forum about the Issue. What to Do With Bentonite Suspensions?

At the instigation of the DCA, a panel discussion took place on Thursday afternoon about the topical issue "What to do with bentonite suspensions?" How much interest this issue quickened became obvious when the chosen venue (cafeteria 1) was quickly packed with people.



Well stocked meeting room

The discussion was hosted by DCA's president Dipl.-Ing. (FH) Marc Schnau; the panel consisted of MR (undersecretary) Dr.-Ing. Heinz-Ulrich Bertram of the Lower-Saxon Ministry for the Environment, Energy and Climate Protection in Hannover, Dipl.-Ing. Hans-Dieter Schulte of Westnetz GmbH in Dortmund, Dipl.-Ing. Michael Bijok of EWE NETZ GmbH in Oldenburg, Dipl.-Ing. (FH) Edgar Mrotzek of Bohlen & Doyen GmbH in Wiesmoor, and Dipl.-Geol. Björn de la Motte of de la Motte & Partner GmbH in Reinbek; the three last-mentioned are also members of DCA's task group 1 "disposal/reutilisation of drill cuttings and drilling fluids from HDD measures".

After a short introductory round, the head of DCA's task group 1, Mr. Björn de la Motte, explained DCA's motives and the necessity to establish this task group on grounds of the decree of the Lower-Saxon Ministry for the Environment regarding the disposal of drill cuttings and drilling fluids; and the task group's objectives, like for example formulating a guideline and/or respective recommendations for the HDD industry, and the findings of the task group hitherto.



Dr. Bertram lectures

Mr. Mrotzek, representing a HDD contractor, illustrated the complex problems contractors are exposed to at the moment due to the divergent interpretations of that decree on behalf of the authorities, the varying executions in the individual Federal Lands, the general uncertainty of the industry, and the extremely increased costs of disposal. In the course of the discussion Dr. Bertram once again explained the rationale for establishing and publishing that decree, as well as the regulations that resulted from it. It is surely pleasing to state here that the Lower-Saxon Ministry for the Environment is highly interested in supporting the work of the task group and will accompany it in all questions related to waste legislation. On a regular basis an interexchange is already taking place by means of common meetings and correspondence via telephone or in writing.

Another positive signal was the information provided by Mr. Schulte and Mr. Bijok respectively who participated in the discussion as representatives of clients. They stated that the clients (Westnetz and EWE Netz) consider it their duty to actively look for ways of disposal at their HDD projects, thus creating definite rules and requirements for requests for proposal, and thus developing fair and equal conditions for the tendering contractors.



Participants of the Panel discussion

A vivid discussion developed; the audience had many questions and comments during the panel discussion. Surely this event provided all participants with a sound basis concerning the issue disposal of drill cuttings and drilling fluids; it also identified and showed the manifold problems that will have to be worked at and answered by DCA's task group in the next few months.

B. de la Motte, de la Motte

Advance Notice!

32nd Oldenburger Pipe Forum

08th to 09th February 2018

Training of skilled HDD Staff According to GW 329

35 participating in Celle

From January 09 until February 07, 2017 inclusively, this year's training courses for supervisors, site managers and machine operators in directional horizontal drilling according to DVGW's worksheet GW 329 were offered at Bohrmeisterschule Celle. The event was organised like every year in cooperation between the brbv (Berufsförderungswerk des Rohrleitungsbauverbandes), the Drilling Contractors Association (DCA) and the training institution, this year Bohrmeisterschule Celle.



Education in Celle, Germany

Unfortunately the course programme at the beginning of this year could merely carry out A-courses - for want of registrations for B-courses. A-courses with 35 participants altogether met with great reception and approval by the participants. Organisation, lesson contents or lecturers all received a throughout positive rating. All participants successfully passed their courses.

The following groups of people were trained:

Supervisors (A): 11 participants
 Site managers (A): 9 participants
 Machine operators (A): 15 participants

We are hoping for a vivid participation in January/February 2018. Bohrmeisterschule Celle will again be on our side as competent partner institution.

D. Quante, DCA

Course for Site Managers at TRACTO-TECHNIK

15 participants attending in Lennestadt

On March 08, 2017, TRACTO TECHNIK offered again one of the meanwhile successful courses for site managers that is commonly conceived, supported and put into action by the DCA, Tracto-Technik and the engineering office PRD Moll (Schmallenberg). Although most HDD sites already showed intense activity at that time of year with open and mild weather, 15 participants from all over Germany insisted on attending this seminar dealing with such topical and relevant issues. This time the seminar was held in plant 1 in Lennestadt-Saalhausen in the seminar room in the attic floor, since plant 3 in Lennestadt-Langenein is still undergoing renovation and extension.

The introducing lecture and the complete presentation were in the hands of DCA's new president Marc Schnau who well understood about guiding with his competent, factual, balancing and poised attitude. The event focussed on issues like construction soil's features, pre-organisation, site requirements, plan of execution, quality

management and documentation, claim-management and verification of supplements (see programme description and lecturers).



All participants got a lot out of the seminar and the good exchange of experiences and thus gained comprehensive and manifold knowledge for their companies. The seminar's strength was that very topical and cost sensitive issues were handled. What new topics the seminar will put emphasis on one can wonder next year again.

H.-J.Bayer, TRACTO-TECHNIK

Review Water Berlin 2017

Review Wasser Berlin 2017

WASSER BERLIN INTERNATIONAL was held from March 28 - 31, 2017. Service providers and product suppliers presented their range of products around water supply and sewerage at the exhibition centre in Berlin. The DCA was represented at a common exhibition stand of associations together with the RBV, the AGFW, the RSV and the GSTT.

At the same time the third No Dig Berlin was held in conjunction with the international pipeline symposium. This integrated event of two days offered professionals the opportunity to exchange experiences about open and trenchless technologies in pipeline construction. Under the keyword HDD the lecture programme presented a lecture by Björn de la Motte from the engineering office de la Motte & Partner (DCA member). In his function as head of the task group "disposal/reutilisation of drill cuttings and drilling fluids from horizontal directional drillings", he presented first findings and approaches against the background of tightened legal conditions.

The exhibition was evaluated with mixed feelings by some of those DCA members attending as exhibitors. The visitors' density could well have been higher at times. Maybe this was owing to the comparably long duration of four days of the exhibition; the stream of visitors was strongly spread therefore.

A first talk was held during the exhibition between DCA's new president Marc Schnau and the executive secretaries of RBV, Mr. Hesselmann, and GSTT, Dr. Beyer. Mutual

consent was that all should strive for a close cooperation of the associations against the background of the Europeanisation of technical guidelines, and the pooling of interests in the face of political institutions.



(left to right) Dr. Beyer (GSTT), Marc Schnau (DCA), Hr. Hesselmann (rbv)

An example is again the precariousness of handling used drilling fluids. The members of all associations mentioned have to face the same problem, as HDD contractors, pipeline constructors and HDD clients or as providers of tunnel drives.

In this context the aforementioned DCA task group and the Rohrleitungsbauverband will have a discussion in June, exchanging knowledge and find agreements about future measures.

Supported by the GSTT, the DCA aims to establish or intensify contacts with other national organisations for the trenchless technology in Europe.

On the evening of March 29, 2017 the event location "Wasserwerk" presented a gala buffet organised by the GSTT. In an impressive ambience (see below) special projects were priced for example. DCA's member LMR Drilling GmbH was awarded the GSTT Silber 2017 for its challenging crossing of the Danube on the borders between Romania and Bulgaria.

Furthermore contacts could be established this evening with representatives of the Italian IATT organisation.

M. Schnau, Bohlen & Doyen




**WASSER BERLIN
INTERNATIONAL**
 Fachmesse und Kongress
 für die Wasserwirtschaft
 28. – 31. März 2017

Advance Notice!

Water Berlin 2019

26th to 28th of March 2019

Fairground Berlin

Responsibilities of HDD Drilling Contractors to Third Parties in the Course of Performing a HDD measure

A professional article of DCA board member Marco Reinhard, Leonhard Weiss GmbH & Co. KG



Introduction

Responsibility is “the obligation related to a certain task to make sure that...everything runs as best as possible, the necessary and the ticket are done and as little damage as possible occurs” [1].

Construction is a task that is linked to numerous legal duties of those who are involved in the works. Some of these duties result from the construction contract. According to this contract, the performing contractor, so the HDD drilling contractor, too, is obliged to effect performance as it was agreed in the contract. Other duties are not linked to a contract but are subject to regulations from civil or public law; usually they concern third parties.

Who are third parties?

When construction measures are performed, usually two parties enter a contract for work and labour. All others that are not involved in the contract are called third parties. This professional article solely deals with these responsibilities or obligations to those third parties, but not with obligation between the contract partners that stem from their mutual contract.

Among those third parties are for example:

- Employees of the drilling contractor or other people involved in the construction
- Passers-by and other traffic
- Residents
- Property owners
- Pipeline or plant operators
- Road construction authorities (federal state, federal land, municipality, private companies)
- Railway authorities (DB AG, private companies)
- Water boards
- Commonality (represented by national authorities)

Obligations and liabilities to third parties

Fundamentally two types of obligations have to be differentiated:

- Civil-law obligations that result from the Bürgerliches Gesetzbuch (BGB - Civil Code)
- Public-law obligations that result from laws and regulations

When HDD measures are performed the following public-law regulations have to be observed amongst others:

- Employment Protection Act
- Law on Working Hours
- Accident Prevention Regulations
- Closed Substance Cycle Waste Management
- Waste Act
- Federal Soil Protection Act
- Federal Mining Act
- Federal Water Act or the respective acts of the federal lands
- Federal Immission Control Act
- Ordinance on Hazardous Substances
- Equipment and Product Safety Act

Leading article HDD Technic

- Workplaces Ordinance
- Ordinance on Health and Safety at Sites
- State Building Codes

In case of non-observance of civil-or public-law obligations, the contractor is liable to the casualty or person concerned. The liability serves to protect third parties of loss or damage of protected properties (life, health, property).

Civil law fundamentally rules that the person responsible for damage is liable. This is written in § 823 para. 1 BGB: "Who deliberately or carelessly violates life, body, health, freedom, property... is obliged to the other to compensate the damage resulting from this."

Violations of public regulations are punished as administrative offence or criminal offence.

The protection of third parties is also regulated in the German Construction Contract procedures (VOB) part B. According to that the contractor has to observe state-of-the-art technologies and legal or governmental determinations when he performs his contracted services. This means that the required protection of third parties is also resulting from the construction contract.

Responsibility for employees

Since the employees of a drilling contractor are not directly involved in the construction contract, they are third parties. The liabilities to employees primarily focus on safety at work. Any contractor is responsible that damages of body and life of his employees are averted. He is enjoined numerous obligations and tasks by laws (labour protection law, BGB, etc.). On site these are for example a suitable organisation, first aid, evaluation of working conditions, provisions for special dangers and monitoring of instructions.

According to the Employment Protection Act, the contractor has to evaluate all hazards that might occur to his employees during the measure and to determine what provisions are required to increase safety at work. He formulates and then trains activity-related standardised risk assessments. Should adjustments be needed because of modified work conditions on site, the performing contractor has to determine site-related hazards and instruct his employees with all necessary provisions included. If the site is controlled by the authorities, the performing contractor has to verify that hazards were determined and all employees were instructed by means of a respective measure catalogue.

In line with the Employment Protection Act, the Law on Working Hours is also effective. The contractor has to guarantee that a maximum permissible daily working time is not exceeded, and that rest periods are taken. Upon completion of the daily working time, a rest period of 11 hours has to be observed.

The tasks a contractor has to effect in the context of employment protection are very comprehensive. When scrutinizing these tasks it becomes obvious that he is dependent on empowering appropriate employees for the tasks. The overall responsibility remains with the contractor, however.

Responsibility towards the commonality

The commonality, too, (not otherwise specified third parties) are beyond the contract when a construction is executed; thus they can be called third parties. The drilling contractor has to keep them from hazards, namely preserving public security and order. Any disorder of public security exists if a relevant legal provision is transgressed.

The state building codes oblige performing contractors to perform the works according to public-law regulations, i.e. carrying out all relevant laws and enactments, thus conducting to the protection of the commonality. Contaminations of water, soil or air, for example, correspond to non-compliance of laws and would endanger the commonality.



The contractor, in particular if he runs a specialist company, is obliged to check execution plans to guarantee that the state-of-the-art technology and the public order and security are not endangered. If he recognizes that the plans are contradictory, he has to inform the client (raising concerns). If he ascertains that public interests are not observed, he is barred from execution under public law. Then he is liable in respect of criminal and police law measures [2].

Responsibility towards construction authorities and water boards

The safe service of roads, rails and waterbodies may not be impaired by construction measures. Property damages have to be avoided. Generally the traffic may not be affected by directional horizontal drillings. This might eventually enforce wireline measuring methods.

When drillings are executed the acknowledged engineering rules have to be observed. Apart from general technical contract conditions (ATV), these normally include DIN standards and additional technical conditions of contract (ZTV). When rails of Deutsche Bahn are crossed the gas and water crossing directive has to be observed.

Particularly worth mentioning are the necessary overlaps to road or rail top edges or to channel floors in the course of HDD crossings of roads, railways or waterbodies. If these requirements are not observed, a new drilling has to be performed eventually. In particular the transition between channel floor and bank slope quite frequently shows deviations from the required overlaps.

Responsibility to residents, property owners, passers-by or other traffic

Traffic-flow safety around a construction measure has to be implemented according to the rules for safety of jobs on roads (RSA). Traffic areas within the range of a site have to be kept clean.

Pipelines may only be laid on or under properties if the piping right was secured. Entrance and access roads to properties have to be maintained during the works. Exceptions are only possible in agreement with the respective residents.

Otherwise all civil-law and public-law policies for the prevention of hazards for individuals and the protection of properties are valid as well.

Responsibility towards pipeline operators

If there are traffic, supply or disposal lines in the site area, VOB part C requires that the directions of the respective pipeline operators have to be observed. Among these operators are for example numerous telecommunication corporations, electricity suppliers, gas suppliers, transport system operators, water suppliers, water drainage companies, traffic signal operators, water and shipping authorities, tramway, police, military, industry and private pipeline operators.

Often found among the operators' directions to protect supply lines are the following requirements:

- The precise location of pipelines has to be explored by means of a search digging.
- Safety distances have to be observed.
- Diggings in the vicinity of cables and pipelines have to be made manually.
- Supply companies eventually have to be informed before a drilling is performed.

Regularly operators allude to liability for damages and personal responsibility of those working on site.

Obligation to explore existing pipelines

The overall line length of underground pipelines for supply or disposal (image 1) in Germany is estimated at more than 5 million km by BG Bau. Annually about 100,000 line damages are reported; compensation paid by non-life insurers amount to about 500 million EUR [3]. Payments of compensation of insureds by employer's liability insu-

Leading article HDD Technic

rance coverage clearly exceed this sum.

The media often reported about sensational pipeline damages because of HDD measures. Houses destroyed due to explosions, power blackouts or tied-up telecommunication in municipalities and cities, or evacuations of urban quarters after gas pipelines had been damaged are just a few examples from this news coverage.

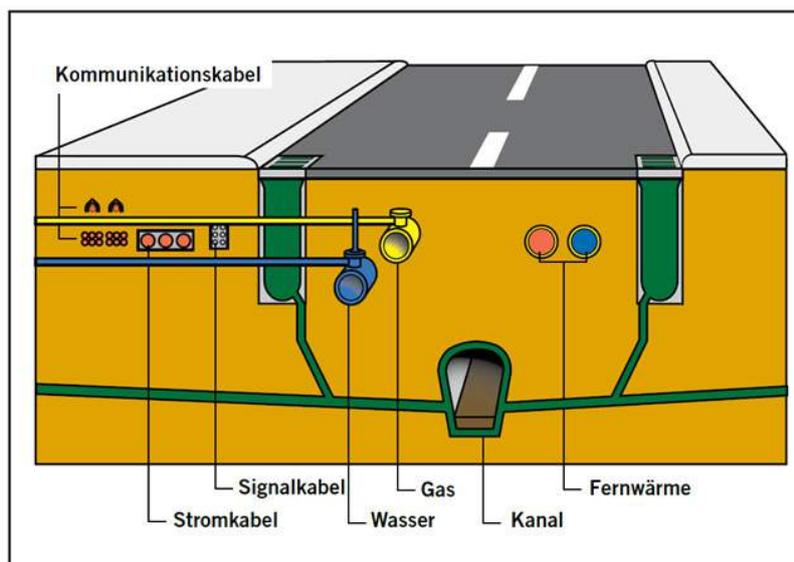


Image 1 underground pipelines for supply and disposal [4]

When construction measures are performed on public or private properties, the contractor has to anticipate existing underground pipelines. In order to avoid damages of these pipelines and to exclude hazards for individuals, he has to exercise due care. He has to explore these pipe-lines, i.e. determine the location and depth of those pipelines existing in the construction area.

This obligation to explore arises from specifications of various kinds:

- legally (BGB, employment protection, etc.),
- according to the employer's liability insurance coverage (DGUV regulations),
- contractually (BGB-contract for work and labour, VOB) and
- technically (directions of pipeline operators, state-of-the-art technology) [5].

A civil engineering or drilling contractor has to acquire that knowledge that postulates a safe accomplishment of the works. In this context he is obliged to acquire the requisite degree of certainty in view of run and depth of supply lines, namely there where reliable documents are available [8].

Any contractor working in the vicinity of supply pipelines is obliged to acquire

- by himself
- by means of exploration
- at the relevant authority
- the requisite degree of certainty

about the run of underground pipelines [6]. If he neglects this obligation, he is liable for occurring damages (§ 823 para. 1 BGB) and can be prosecuted criminally in case of body injuries.

Can the HDD drilling contractor delegate his obligation to explore?

Corresponding to the legal principle of freedom of contract, two contract parties can practically find agreements about anything that is not against public policy or contravening laws. Building companies, so drilling contractors as well, carefully have to ascertain where supply pipelines are running. In practice HDD drilling companies (contractors) often contractually assign the exploration of the existing pipelines to the civil engineering companies (client).

According to legal practice such delegating is indeed allowed in principal; but the primary due diligence must not be omitted. The party legally responsible to maintain safety (party obliged to explore) always has its own duties in terms of choice, control and monitoring; extent and dimension conform to the particular case [9]. According to experience, such duties of choice, control and monitoring can be very complex in order to comply with legal practice. Then the question comes up whether a self-contained exploration might be wiser.

The constructor can assign in writing the legal duty to maintain safety to employees, provided these are appropriate on a professional and personal level [5]. Should the constructor not de-plot a site manager, the legal duty to maintain safety is assigned to the drilling crew. If the drilling crew did not explore the pipelines themselves, they are nevertheless obliged to check very carefully whether the requisite degree of certainty about run and depth of the pipelines is obtained (exploration by the civil engineering company to whom the duty was delegated).

Apart from the usual drilling works, the drilling crew also has to tend to technical aspects (choice of tools, evaluation of the geology, choice of drilling fluid), and to organisational aspects of the site (disposal, area of assembly, accommodation). They have to maintain safety at work and see to an extensive documentation of all technical intermediate steps of the drilling. Will then remain enough time and energy to comply with the duties of choice, control and monitoring in matters of exploring adjacent pipelines?

Conclusion

Besides duties resulting from their construction contract, HDD drilling companies have to observe a long list of responsibilities and duties towards numerous third parties. In the course of construction, they have to adhere to civil and public law regulations and follow the state-of-the-art technology. In case of non-observance claims for compensation, administrative fines or eventually prosecution are impending.

Damaged supply and disposal pipelines cause high risks; property damage can be considerable. The duty of exploration plays a major role for those responsible for the construction accordingly. A drilling company can reach an agreement with its client that he shall explore the existing pipelines. But this does not release a drilling company from discharging their responsibility, i.e. observing their due diligence by means of extensive tasks of control and monitoring.

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M.Reinhard, Leonhard Weiss

Education in France/ Conference in Krakau

HDD Education in France - Status

The French situation cannot be compared to the one in Germany. There are only about 20-30 HDD drilling companies in France; two of them are larger with drilling equipment ≥ 40 t pulling force. Round about 50-60 companies have only one machine in use. Otherwise there are maximum 4 - 5 big clients who control most of the pipeline market. These clients have developed from structures similar to administrations and work very independently without common networking.



In Germany, certification according to GW 301, group GN 2 prescribes the training of a supervisor. Presenting such a certificate of training is prerequisite of a certification. In France, however, first of all a Professional Sector (PS) for HDD has to be installed. This PS can register then a Professional Qualification Certificate (PQC) at the respective institute (RNCP). Afterwards the PS can choose a training centre that determines the content of the training together with the PS.

The FSTT is leading the way for the establishment of a Professional Qualification Certificate (PQC) dedicated to the HDD industry in France. The target is now set: first training session on fourth quarter 2019.

To hit the target, a task group has been created within the FSTT involving persons having a deep knowledge about the HDD industry and market in France. Their duties include (a) understanding the complex process of establishing a PQC where both Labor Unions and Pro-

fessional Sectors are involved, (b) liaising with the HDD Contractors and Clients in order to understand their needs, to adapt the PQC content accordingly and to get their commitment, and (c) establishing the Competency Framework, building the training sessions contents and deciding the Evaluation Criteria.

So far, massive work has been completed by the task group amongst which the approval of the Competency Framework, the preparation of the charter that confirms the commitment of HDD Contractors and Clients and for which the first signatures will take place during the French No-Dig (Ville Sans Tranchée) event on June 2017.

The FSTT team can also rely on experience gained by the DCA in Education in Germany and The Netherlands where extensive efforts are also deployed. Such cooperation is aimed to strengthen the ties between the DCA and national members of the ISTT.

A.Khemiri, HDI

Trenchless Engineering Krakau

From June 06 - 08, 2017, Trenchless Engineering 2017 was held in Krakow. A combination of conference, workshops, discussion fora, and exhibition had invited specialists from the field of trenchless engineering to the waterworks Krakow. An additional item of the programme was the bestowal of the TYTAN Award that is given for exceptional achievements in trenchless pipeline laying.

An important role at this exhibition played the HDD method, as well. Interesting lectures delivered by clients, drilling contractors, planners and suppliers or service companies were presented.



President Marc Schnau presents DCA goals

The DCA, too, contributed a lecture to the programme given by president Marc Schnau. Key aspects of his lecture were the presentation of DCA's general tasks and objectives, the issues and current state of affairs at DCA's two task groups, current challenges and chances of the HDD industry, and the planned future activities of the DCA.

Predominantly Polish companies attended this conference but some international participants from the field of the HDD technology were also present. A professional simultaneous translation in Polish/English/Polish guaranteed communication and comprehension during the lectures; the lectures were quite substantive altogether.

The event was accompanied by a casual barbecue dinner on the first evening, and a formal dinner with the bestowal of the TYTAN Award on the second day.

M.Schnau, Bohlen & Doyen

Status Task Group 1:

Disposal and Reutilisation of Drill Cuttings and Drilling Fluids

Task group 1 met regularly in the past months to discuss the latest developments and researches considering the disposal and reutilisation of drill cuttings and drilling fluids. Further procedures shall be determined, or findings worked out. The focus is still increasingly put on avoiding or reducing the quantity of waste, as well as possibly optimising processes of reprocessing and reutilising of the accruing drill cut-



tings and drilling fluids. At present this DCA task group aims to fathom interexchange or cooperation with other associations (like Rohrleitungsverband) in order to gain a broader, intersectoral common basis and learn about technically or economically interesting approaches from various channels (eventually from the waste management industry). Then it is easier to channel all interests and findings, and together with the authorities legally sound solution approaches can be found. The objective of this DCA task group is to give a résumé of these solution approaches and findings until the end of this year at the latest, and to provide the whole industry with consistent recommendations for action.

In a first step we will present the current findings of the task group to the board; afterwards we will determine the next steps to formulate recommendations.

B.de la Motte, de la Motte

Status Task Group 2:

We have so far made an inventory of the problems and the conditions that operators have on their pipelines after installation in HDD's. We have noticed that internationally various operators have different standards for acceptance, sometimes very clear, sometimes vaguer. Where clear specifications exist, they are either measuring resistivity or conductivity, however the results seems to be comparable to the German requirement of a resistivity of $> 108 \Omega m^2$.



We have made an inventory of the line and field joint coating systems that do exist, and their possible combinations.

It was recognised that various systems are all tested to different standards due to their different nature. In Germany some systems are described in regulations (Regelwerke) and these are well described but not all systems are used in Germany. Still many systems are difficult for the task group to describe as of some systems we do know they exist, but do not have sufficient information.

Other aspect that have to be taken into account are the complexity of the drill and the geology.

Currently the group is setting up the structure of the report

J.Stoelinga, Visser & Smit Hanab



It is also evident that defects are getting rarer, but still exist. In cases where damage was established at the current drainage test when investigated roughly 80% seems to be on the field joints.

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BKP Berolina Polyester GmbH & Co. KG - international

BKP Berolina is a worldwide technology leader in providing UV-cured glass-fibre reinforced plastics, GRP and Cured In Place Pipes (CIPP) lining systems for trenchless rehabilitation of pipes and GRP surface protection for steel pipes. Founded in 1961 in Berlin, the enterprise has successfully specialized in the processing of glass-fiber reinforced plastics (GRP). We set standards in the development and production of Cured in Place Pipes with many uses as well as the technical equipment necessary for their installation. BKP is focused on the two main products Berolina-Liner and GRP protection for steel pipes (BWB surface protection).

20 years of BWB surface protection for steel pipes – a story of success

The introduction of the GRP coating for steel pipes 20 years ago marketed as the BWB system was a single story of success for BKP Berolina. Meanwhile more than 110,000 meters of gas pipes (DN 100 – DN 1,400) have been coated with this special and highly resistant GRP coating. Our BWB system contains resin impregnated glass fibers tangentially and axially wound on the PE coated steel pipe. Meanwhile an environmentally friendly and styrene free resin is cured by using UV-light. The coating protects the steel pipes from being damaged by obstacles in the soil when being installed by horizontal drilling or similar methods, which might cause corrosion.

The on-site protection of welded joints is applied by attaching glass fiber mats combined with resin and consequently being cured by UV-light.



Picture 1: HDD DN 500



Picture 2: Pulling DN 1400 with GRP sliding skids

GRP-sliding skids (spacer)

As an additional protection for GRP protected steel pipes – BKP developed in 2011 the GRP-sliding skid (also known as spacer). The GRP-sliding skids are used as an additional protection when drawing pipes into an existing pipeline (micro tunnel or host pipe). The local thickness increase on the outside of the GRP protected steel pipe by the factor of 10.



Picture 3: GRP protected steel pipe with additional GRP-sliding skid (brown) (©BKP)

For more information please visit: www.bkp-berolina.de

Company Presentation: HEADS Sp. z o.o.



HEADS is a dynamic company that started operating in the European market in 1995 as a distributor of HDG bentonite. HEADS became a polish company in 1997 and since 2000 distributes highest quality HDD bentonites based on its own technology and manufactured by in-house production plant. Since the beginning, our company offers not only high quality products but also mud engineering services. We achieved and still hold a leading position in the horizontal directional drilling and microtunneling branches.

The stability, credibility and professionalism have allowed our company, together with our clients, to accomplish the most difficult projects in the trenchless technology market. Our activity consists of three key pillars: production of drilling fluid systems, mud engineering service and research development department.

Production of drilling fluid systems

We offer products specially designed for directional drilling applications: high quality activated bentonites like Teggel HD and Bestbore, environmental friendly natural polymers, tools and drilling equipment.

Mud Engineering service

HEADS provides qualified engineers for the duration of the drilling process. Each engineer is skilled, competent and well versed in providing technical services for the maintenance of drilling fluids used in the proposed drilling operation.

Our mud engineers present the highest available standards. Long distance, large diameter drilling crossings in difficult geological conditions require extensive knowledge on how to use the information and equipment to minimize the mud costs and the possible risk. We conduct constant staff trainings, thanks to which we are able to help our clients in successful completion of longest, biggest and most difficult, world record- breaking projects, such as latest PWN Den Helder - Texel crossing finished in April 2017 (4600 m long).

Research development department

Our engineers work on new technological solutions to satisfy trenchless market's expectations. Research and development department constantly works on implementation new ideas that are used in completing most complex projects. Furthermore HEADS conducts intensive laboratory tests for the systematic monitoring of our products quality to keep our products standards as high as possible.

Through our longstanding network of partners and associates, HEADS products and services are well known and appreciated in Poland, West and East Europe.

The company's headquarter is located in Krakow. You can find us at www.heads.com.pl and heads@heads.com.pl.

Prime Horizontal launches MudVis System

P rime Horizontal is launching our newly developed, automated mud viscosity and specific gravity measuring and logging system called MudVis.

After a thorough process of development and an extensive period of testing on site the product is ready to go live.

MudVis samples your stock or mixing tank bentonite at regular preset intervals. The viscosity and specific gravity values are logged in the processing unit and available (real time) for display on various handheld devices for data analysis. The MudVis system complements your mud mixing system and helps you control the quality of your drilling fluid.

Information:
www.primehorizontal.com



Information! IBZ Neubauer GmbH & Co. KG moved

New Adress:
IBZ Neubauer GmbH Co. KG
Büro Berlin – Dükerbau und Vermessung
Contact:
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13179 Berlin

Preview Annual Congress

DCA's 22nd Annual Congress will be held in Dordrecht, NL from October 04-06, 2017

Congress Topic: "HDD First"

The Focus will be on the Panel Discussion about the Issue "Trouble Shooting"

After Amsterdam, Maastricht, Den Bosch and The Hague, DCA's annual congress of 2017 will be held in the Netherlands for the fifth time. From October 04-06, 2017, members, partners and friends of the DCA will meet at the van der Valk Hotel Dordrecht to hear interesting lectures and exchange experiences. Dordrecht is located in the Dutch province South-Holland, about 20 km southeast of Rotterdam. It has about 120,000 inhabitants and is the third largest city of the province. Nearby Rhine branch Beneden Merwede divides into the Kanal Noord, the Oude Maas and the Dordtsche Kil. The "three-river junction" north of the island Dordrecht is Netherland's most intensely navigated waterway.



Dordrecht

Apart from interesting lectures, like for example about risk management of HDD projects, and about HDD projects like the crossing of the Danube river in Romania, a panel discussion about the topic "Trouble Shooting" will take centre stage of the congress.

"You can avoid mistakes if you gain experiences. And you gain experiences if you make mistakes"

(Laurence Johnston Peter (1919-1990), American management consultant)



Hotel van der Valk Dordrecht

The DCA as technical association of the HDD industry has set the goal to create a kind of "failure management" within its members. Failure does not necessarily mean lack of performance, however; rather we understand it as deviation from the original plan. False estimations and misinterpretations (for example in geology) are also relevant of course.

HDD contractors in the DCA are reasonably aware what unplanned and unwanted incidents can impede the works or cause additional efforts in practice.

Loss of drilling fluids, blowouts, breaking bars, tool wear - these are just some items on the long list of problems that have to be solved. If it is anyhow possible we prefer to shut these experiences away in our company. Or we well treasure these experiences and estimate them as a future advantage in competition.

But instead we should increasingly and associated avail ourselves of just these experiences; then we can effectively augment the quality and reliability of the HDD method in its entirety. Finally all regular

HDD members are competing together both with conventional pipe laying and with other trenchless construction methods.

For that reason the DCA wishes, together with its members, to address ourselves to this task and delve into this issue with a panel discussion during our annual congress. First vice-president Jorn Stoelinga will provide some succinct insight titled "Oh my god"; the ensuing panel discussion will be based on five carefully chosen complexes of topics that are each introduced by board members in short presentations. We will discuss both topics from the large-scale industry as well as from the field of smaller or medium facilities.

The round will be presented by Franz-Josef Kissing of Open Grid Europe who, from the clients' view, will surely contribute instances of difficult constellations during HDD drillings. The board members are hoping for active collaboration from the audience. It is planned for the beginning of 2018 to consolidate some aspects from this discussion in a one-day exchange of experiences (see advance notice).

Sponsors of this 22nd DCA annual congress are the company Egeplast and Barpoid IDP from Germany and the Dutch companies Visser and Smit Hanab, Normag, Vermeer, Gasunie, Brownline, van Leeuwen and Deltares. We cordially thank all of them for their support!

The congress programme will be complemented and topped off by an attractive social programme for those accompanying (see advance notice).

D.Quante, DCA

Annual Congress in Dordrecht - Social Programme

Visitation of World Heritage Site Kinderdijk and Workshop in Distillery Rutte & Zn

The accompanying social programme of this year's annual congress first of all invites the participants on Wednesday to the obligatory guided tour between 02:30 and 05:00 p.m. to explore the city of Dordrecht.



Windmills around Dordrecht

The venue this year lies in the province South-Holland and wins over with an appealing location, island-like surrounded by broad rivers, midst one of Europe's highest frequented river intersection. You can look forward to an idyllic landscape formed by dyked polders with tide-ways, creeks, windmills, charming villages, hamlets and fortress cities.

The city has 130,000 inhabitants and is the eldest one in this province. Its cityscape is one of the best preserved historical views with a nearly entirely preserved medieval town planning structure. Dordrecht has 900 national listed monuments and 700 other historical buildings. It is considered important trade centre in the 14th century, is birth-place of independent Netherlands in 1572, and a centre of Calvinism.

Let us immerse ourselves in the historic past of picturesque Dordrecht and experience long bygone times!



Onze-Lieve-Vrouwekerk (also called Grote Kerk)

Thursday morning will concentrate on Dordrecht's environs. Highlight, west of Ablasserwaard, is the World heritage Site Kinderdijk. The windmills from the 18th century belong to Holland like cheese and Klompen (wooden shoes); they are a very popular tourist attraction. A boat will take the participants along the large concentration of windmills at the polder's deepest part. Since 1997 they are a UNESCO World Heritage Site; originally they were pumping excess water from the polder to regulate the water level. There will also be the chance to have a closer look at some mills. Around noon the group will stop at Brasserie Downtown in Dordrecht that offers a great view of river Maas. Two hours enjoying delicious snacks and drinks will prepare everyone for the creative programme of the afternoon.

At 02:30 p.m. starts the workshop at the liqueur distillery Rutte & Zn. The distinctive shop at the corner of Vriesestraat and Stooftstraat was established in 1872 and is selling liqueur like "Oude Simon" Gen-ever, cinnamon and almond liqueurs and fruit liqueurs - pure natural products of high quality. Apart from the basic assortment they also produce special seasonal products made from the fruits of the

Dordrecht island. Discover the variegated range in the historical ambience of this old shop and become creative when you make your own liqueur.

Around 04:00 p.m. the group will return to Hotel Van der Valk.



Idyllic harbour

Then on Thursday evening, the DCA will welcome all congress participants onboard the SS Rotterdam. This "grande dame" promises a great experience with its beautiful view of river Maas and the skyline of the dynamic city Rotterdam. The SS Rotterdam was the former flagship of the Holland-America-line, travelling the seven seas for more than 40 years since it first sailed towards New York on September 3, 1959. In 2001, the Stichting Behoud Stoomship Rotterdam (SS Rotterdam trust) attended to the ship, aiming to protect and preserve it with restoration projects, art lectures and presentations. It is open to the public since 2010.

Friday morning can be individually spent, for example by means of shopping or in a spa.

A. Quante, DCA

22nd DCA Annual Congress Dordrecht

Topic: HDD-First

Wednesday, 04th October 2017

- 11.30 – „Check in“ at
18.00 Hotel Van der Valk, Dordrecht
- 13.00 **Lunch** at Hotel van der Valk
- 14.30 **Discover Dordrecht**
- 19.30 „Cocktail reception“ sponserd by Hotel van der Valk
- 20.00 **Dinner** at Hotel van der Valk (Live Cooking)

Thursday, 05th October 2017

- 09.00 **Welcome**
Dipl.-Geol. Dietmar Quante – Geschäftsführer DCA-Europe
- 09.15 **Welcome**
Dipl.-Ing. (FH) Marc Schnau - President DCA-Europe
- 09.30 **Horizontal Directional Drilling -
Design and construction over the years: 1980 - present**
Ir. H. J. Brink, N.V. Nederlandse Gasunie
- 10.15 **Development of the offshore wind industry**
Willem Smelik, Meewind, Niederlande
- 11.00 **Coffee break**
- 11.20 **HDD link for 60 million users**
Alexandre Cambier, HDI
- 12.00 „OMG“
John Doe, DCA
- 12.45 **Lunch** at Hotel van der Valk
- 14.30 „HDD Trouble-shooting“ - Panel discussion (Part 1)
Moderator: Dipl.-Ing. F.-J. Kissing, Open Grid Europe

- 15.30** **Coffee break**
- 15.50** **„HDD Trouble-shooting“ - Panel discussion (Part 2)**
Moderator: Dipl.-Ing. F.-J. Kissing, Open Grid Europe
- 16.30** **Summary - outlook**
- 19.00** **Meeting Hotel Lobby – Transfer by bus**
- 19.30** **Cocktail reception at Steam Ship de Rotterdam**
- 20.00** **Dinner at the Steam Ship de Rotterdam**
- Friday, 06th October 2017**
- 09.00** **Everything you wanted to know about wire line steering systems –
but where afraid to ask**
Dan Billig, Prime Horizontal
Craig Rowney, Inrock International LTD
- 09.40** **Contractual Risk Management of HDD Projects**
J. Kevin Mullins, Barrister-at-Law,
JKM Contract Management Consultancy b.v.
- 10.20** **Coffee break**
- 10.45** **Danube River Crossing - Geotechnic (Part 1)**
Dr. Christoph Donie, Dr. Donié Geo-Consult GmbH
- 11.30** **Danube River Crossing - Execution HDD (Part 2)**
Dipl.-Ing. Günter Kruse, LMR Drilling GmbH
- 12.15** **Everything you always wanted to know about drill pipe, but were afraid to ask**
Thorn C. Huffman, Tiger Trading Inc.
- 12.45** **End of program**
- 13.00** **Lunch at hotel van der Valk**

Preview HDD-Seminar/ HDD Education 2018

DCA broadens its Programme of Training and Further Education for Members

Pilot Seminar will take place on January 18, 2018 in Essen

Since the association was founded, training and further education of the staff working at the device has been one of DCA's major objectives. Since 2004, and in cooperation with the DVGW and the rbv, more than 700 employees of HDD contractors have been trained and educated in the fields supervision, site management, and machine operation at Bohrmeisterschule Celle and Fachhochschule Oldenburg/ZFW. Furthermore professional training programmes according to GW 329 have been offered in Kassel for years. Here, too, the DCA has a

leading role regarding planning, design of the programme and course instruction. Additionally there are regular courses in cooperation with the DCA for site managers at Tracto Technik, HDD flushing seminars in Celle and trainings for machine operators in the Netherlands. Negotiations regarding training measures in France are also on their way.

At the beginning of 2018, a new component of training and further education will be added to the course programme that will be tested in Germany for the time being. In addition to the ongoing training measures overseen by the DCA, the new board around President Marc Schnau determined to configure an educational programme specifically for DCA members. First and foremost the objective is to create a forum for discussions about various HDD issues on a re-

gular basis. At the annual congress in Dordrecht the kickoff will be set with the panel discussion about the issue "HDD-Trouble-Shooting". DCA members from the large-scale drilling industry and from the field of mini and midi devices will discuss with the congress participants about selected problems at HDD projects, and the approaches chosen to solve them.

The pilot seminar planned for January 18, 2018 at the premises of the Open Grid Europe GmbH will pick up on some items of that discussion in Dordrecht, further delving into them during a one-day exchange of experiences. The participation in this event will be free of costs (Audience: supervisor, skilled staff) and is reserved to DCA members alone. Documents for application will be sent to the members in the autumn member information. The number of participants will be restricted.

D.Quante, DCA

Further Education GW 329

13th December 2017 Schlosshotel Wilhelmshöhe, Kassel



The seminar is primarily aimed to supervisors which have an examination certificate in the A and B training courses. In addition, it also serves as a suitable training course for technical personnel and construction managers, who are active in the area of the horizontal drilling method.

HDD-Course - GW 329

In January / February 2017 the next courses according to DVGW Worksheet GW 329 of the skilled stuff "skilled supervisor, site manager and machine operator" will be hold at the Bohrmeisterschule Celle.



- | | |
|---|--------------------------|
| 1.1.1 skilled supervisor (A/B) for horizontal flush drilling method according to DVGW Worksheet GW 329 | |
| A: 08.01.-12.01.2018 | A + B: 08.01.-17.01.2018 |
| 1.1.2 site manager (A/B) for horizontal flush drilling method according to DVGW Worksheet GW 329 | |
| A: 08.01.-19.01.2018 | A + B: 08.01.-26.01.2018 |
| 1.1.3 machine operator (A/B) for horizontal flush drilling method according to DVGW Worksheet GW 329 | |
| A: 15.01.-26.01.2018 | A + B: 15.01.-02.02.2018 |

Hint: Please register at www.brbv.de



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