... Your reliable partner in protective coating providing

- Counselling
- Quality Assurance
- Damage Assessment
- Project Management
Anually, corrosion causes damage worth millions to buildings. The main cause of this is the fact that too little attention is paid to protective coating in the planning, implementation and operating stages. Besides unsuitable or insufficiently compiled specifications and performance lists as well as unsuitable choice of material an inadequate design plays an important part. So expert execution of protective coating work is indispensable in order to counteract corrosion right from the start.

As a competent consulting enterprise with 50 years of tradition Helmut Müller GmbH (limited company) offer you a large performance portfolio all about protective coating. In 1964, on foundation of the company by Helmut Müller sen. his self-employed business opened, which, meanwhile, employs third-generation family offspring. Presently, we also offer practice-related production surveil-lance in protective coating for an international circle of customers.

Additionally, we compile the required specifications and tables of performance offered. Compiling and keeping cadastres, LOPs as well as protective coating related warehouse, maintenance, overhaul and repair concepts also belong to the portfolio of Helmut Müller GmbH.

Besides Helmut Müller GmbH, who focus on quality control and counseling in protective coating as well as in welding, Helmut Müller Protective Coating Consult (HM PCC) is also part of the combine, who, with their publicly accredited and sworn-in experts, compile court and private expertise and carry out production and material checks. Additionally, the company offer regular training and schooling as well as expert lectures in important committees. Additionally, participants in various study groups take part in compiling standards and sets of rules.

In order to come up to customers’ expectations and to offer well-founded expertise on a technical basis, we focus on a long-standing optimum mixture of long-time practical and theoretical job experience in the field of protective coating. Our team includes, amongst others, engineers in protective coating, protective coating technicians, coating inspectors, varnishing technicians and chemists, welding engineers, building examiners etc.

Our staff have acquired the necessary national and international expert qualifications and certificates. (FROSIO Lev. III /NACE , Lev. II Prüfer (examiner) VT / PT acc. to DIN EN ISO 9712, Offshore-certifi cate Seasurvival / HUET acc. to NOGEPAPITOTO, rope access technique acc. to FISAT resp. a training course in great height safety acc. to GWO standard. Additionally, each of our employees has obtained the SCC certificate and has concluded his training as a first aider. The medical examinations required within the framework of the relevant certificate are carried out regularly.

Because of comprehensive knowledge of working in practice we are different from most of our competitors. From this experience we can judge the problem areas, technical facilities, temporal and financial requirements, how long operations will take and what they will cost. Especially with busy building sites this advantage must not be underestimated.

Our company has got access to all necessary measuring and checking facilities for work on building sites. We also have laboratory equipment which allows us to carry out a large part of material and coating checks on our won. For special chemical analysis and checks we cooperate with certified institutes and laboratories.

In addition to our permanent staff members we can, if need be and for special cases, temporarily employ free-lance workers, so that we, even at short notice, can take over all jobs entrusted to us and carry them out expertly. Helmut Müller GmbH dispose of a network of inspectors all over Germany, so that we can serve our customers all over Germany, Europe as well as trans-continetally.

Usually, our customers usually include prospective builders, as well as professional entrepreneurs and national institutions and authorities in charge of bridges and steel structures in water, maritime technology (shipping), chemistry, refinery and water management (works, tanks and containers), building manage-ment, engineering works and the oil and gas industry. The development of off-shore wind industry in the North and Baltic Seas has also enlarged our operational area. Helmut Müller GmbH has been involved in planning and quality control from the beginning. One of the first projects in the offshore wind indus-try was counseling and surveying production control of the substation “Alpha Ventus”. Presently projects of 10 offshore wind parks are surveyed by us.

As a family-guided enterprise we can work flexibly. Our inspecting activities including a complete documentation etc. are compiled reliably at best quality level. Our utmost priority is to deal with customers and suppliers as well as all other people involved confidentially and respectfully.

Helmut Müller GmbH neither produce coating material, nor are they involved in applying or processing. They are independent and neutrally committed to quality and their customers.
A corrosion damage is expensive and has great influence on the stability of buildings. The damage can be avoided if you pay attention to corrosion protection in all project phases. Our own damage statistics give proof of the fact, that in 70 – 90 per cent of all cases protective coating resp. coating damage are due to processing mistakes, inadequate specifications, warehouse, transport and assembly damages.

In order to counteract this corrosion damage and to extend the service life of a building, we, a competent consulting enterprise in the field of protective coating, will always be at your side with our comprehensive service portfolio.

**Our Services**
- Expertise
- Reports before court
- FROSIO-inspections
- NACE-inspections
- Engineer and technician services
- Project management
- Checks in production
- Quality assurance
- Vocational training
- Development of plans and conceptions
- Damage expertise
- Development of specifications
- Description of services offered
- Development of warehouse conceptions
- Analysis of state of affairs
- Final or partial inspections
- Protective coating inspections
- Colour locating
- Offshore inspections & services
- Auditing
- Welding seam checks
- Checks of buildings
- Checks of documents
- Checks of material
- Laboratory checks
- Inspections by endoscopy
- Inspection by drones

**Our Qualifications**
- Corrosion expert
- State-approved protective coating technician
- State-approved colour and varnish expert
- Engineers in protective coating
- FROSIO Paint Inspector Lev. III
- NACE Coating Inspector
- Coating inspector with approved DIN-qualification
- VvWS- expert (SOG)
- VT2 / PT2 examiner at levels DIN EN 473 / ISO 9712
- Expert welding engineer
- Engineer diver in cooperation
- Industrial climber

**Memberships**

**Müller "goes air"**
Inspections from above with the latest drone technology

Because of modern drone technology visual inspections of large heights and areas hardly accessible to man can easily and quickly be carried out without any longer preparatory period.

**Müller "goes inside"**
Visual checks with endoscopy (VT)

On the basis of DIN EN ISO 9712 we, with our well-trained and certified VT examiners, offer you an assessment by means of endoscope to enable you to detect defects and damages with pipes, tank installations etc. very early.

Causes of corrosion damage

- **2 %** Material defect
- **40 %** Wrong specifications
- **4 %** Other causes
- **54 %** Processing errors, damages at warehouse, - in transit, - at assembly

Source: Helmut Müller GmbH
Offshore Wind Power Plants
Damage Expertise, Quality Assurance & Production Supervision

The removal and repair of damage to the coating of offshore wind power plants is an incalculable risk. To avoid this in advance, the quality of the corrosion protection plays a decisive role. Since the construction of the first offshore wind farm off the German coast of the North Sea and Baltic Sea, our experts have been on-site and support offshore wind farm projects in corrosion protection issues.

We offer
• Consultation in the planning of offshore wind power plants
• Creation of specifications and technical descriptions
• Support during the certification procedure and system selection
• Creation of quality assurance and corrosion protection plans
• Quality assurance during construction
• Audits and inspections during production
• Creation of documentation and status determinations
• Completion of approvals through to the accompaniment of systems to the offshore site
• Quality assurance during installation and assembly works at sea

Colourmetric requirements
In their guidelines on "Offshore wind power plants" to ensure the safety and efficiency of vessel traffic - version 2.0 of 01 July 2014" as well as in the "Framework on guaranteeing expert application on traffic requirements in the vicinity of offshore wind power plants – labeling – Version 2.0 of 01 July 2014" the Waterways and Shipping Directorates North & Northwest require day-time marking of offshore wind power plants within the area of the German exclusive trading area (AZW) in the North and Baltic Seas as well as within and along the German sea waterways.

The implementation of day-time marking of offshore plants within AZW is to be carried out with yellow paint on every single installation in a defined area. The marking of the individual installation is to be carried out with black paint.

In order to fulfil the requirements on supervision colours of shipping markings the visual day-time marking (in this case yellow and black) has to be in line with the corner point coordinates of the colours types (X, Y). Colour measuring has to be effected in line with DIN (German Industrial Norm) 5033 and 5036-1. In order to fulfill these stipulations Helmut Müller GmbH (Ltd) offer the following services:

• Staging examinations on visual day-time marking at the implementation stage (new according to DIN 5033 and DIN 5036-1 with 2°Normalbeobachter Lichtart D65 (light shade), measuring geometry 45/0 oder 0/45

• Staging examinations on visual day-time marking in every-day operations (application stage) according to DIN5033 and DIN 5036-1 with 2° Normalbeobachter Lichtart D65 (light shade), measuring geometry 45/0 oder 0/45

• Support in determining the number, location and size of test surfaces in an offshore formation

• Development of checking strategies including checking intervals for the realization stage and everyday operations
Although Helmut Müller GmbH does not carry out any corrosion protection work, many of our employees have many years of experience in this field. This is the only way to ensure practical assessment during inspections. Our specialists are in-demand for quality monitoring and consultation, especially in the fields of shipbuilding for shipyards and shipping company owners, the offshore oil and gas industry and in steel hydraulics construction, where the constructions are exposed to a constant force by the seawater. For this reason, we can provide support for the renovation and preparation of corrosion protection on:

- Vessels and pontoons
- Floodgates
- Waterway troughs
- Sea markers and sheet piling
- Embankment dams

We offer:

- Creation of specifications and technical descriptions
- Selection and determination of suitable coating systems
- Checks on the construction during the building phase
- Creation of documentation
- Damage expertise
Power Plant, Engineering and Industrial Construction

Damage Expertise, Quality Assurance & Production Supervision

It is necessary to protect all steel constructions and also some concrete structures from corrosion. For this reason, our consulting company provides planning, inspections and documentation in the fields of power plant, engineering and industrial constructions as well – all over the world. Only in this way it is possible to ensure corrosion protection and fulfil the duties assigned to it with regards to stability, durability and protection factor to conserve the value of constructions.

Securing the corrosion protection and quality assurance of:

- Conventional power stations
- Engineering constructions
- Bridge structures
- Industrial facilities
- Chemical and refinery constructions
- Cranes and hall constructions

We offer:

- Creation of specifications and technical descriptions
- Selection and determination of suitable coating systems
- Checks on the construction during the building phase
- Creation of documentation
- Damage expertise
Tank and Container Protection

Damage Expertise, Quality Assurance & Production Supervision

The internal coatings of tanks must be carried out with the utmost care, complying with the specifications relating to water law. Just a small defect, such as the overlooking of a pore in the coating, can lead to a breakthrough in the tank wall or tank floor, causing damage to the environment and water pollution.

Coatings within tanks and containers, which are filled with stored liquids such as sewage, petrochemical or chemical products, industrial and drinking water, fertiliser or similar, cannot be monitored and inspected on an ongoing basis. This makes it difficult to recognise damage in the coating and processing defects in a timely manner.

For this reason, completely professional execution by specialised companies is so decisive for their function and durability. Combined with quality assurance checks by our experts, this can reduce the risk of an incalculable defect to a minimum.

We offer:
- Creation of specifications and technical descriptions
- Selection and determination of suitable coating systems
- Checks on the construction during the building phase
- Creation of documentation
- Damage expertise
Helmut Müller is a recognised expert in the field of corrosion protection. With the foundation of Helmut Müller Protective Coating Consult in 2005, he provides advice as an independent and neutral expert and consultant in quality assurance. This comes after he worked as the managing director and shareholder in companies working in operative corrosion protection between 1976 and 2005. He became a publicly appointed and sworn expert for corrosion protection, coatings and lining for plant engineering and container and tank construction in 1999 through the IHK Emden (Emden Chamber of Commerce and Industry).

As well as various other qualifications in the field of corrosion protection (including FROSIO Paint Inspector Level III, DIN CERTCO coatings inspector Level C), Helmut Müller is also an expert for water protection (VawS - German ordinance on plants for storing, bottling and handling water-polluting substances), for plant inspections in terms of the "Wasserhaushaltsgesetz" (WHG – Federal Water Act) and a member of the "Sachverständigenorganisation Gewässerschutz" (SOG – Association of Experts in the field of Water Protection).

With membership in various professional associations, research groups and committees, which focus on optimising corrosion protection, Helmut Müller is also a member of the German planning committee and FROSIO audit committee for the certification of paint inspectors.

By request, all courses can also be staged at your company as inhouse events. All seminars are largely directed and presented by Helmut Müller.

We regularly offer training courses to site managers and skilled workers employed by protective coating firms.

In such courses the focus is on practice-oriented schooling, at which all contents is presented skillfully to give every participant the chance to understand things.

Participants acquire basic knowledge and skills relevant in protective coating from planning to quality control measures on the basis of practical examples and theoretical information.

In order to intensively deal with some areas including individual interest we offer the possibility to discuss what subjects should be given priority before courses start.
Helmut Müller GmbH
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