HEGGEL®

You Build, We Protect!

NEWSLETTER

HEGGEL® AI

December 2025

INSIDE THIS ISSUE:

A New Era of Intelligent Corrosion Protection

- **Advanced AI Support**
- **Fastest Path to the Right Coating System**
- **Instant Technical Guidance by High-Tech AI**

Smart, Fast, and Trusted: Your First Step to the Right Corrosion-Protection Solution

> Industrial Protection Expertise, Now Powered by High-Tech Artificial Intelligence

In today's global industries, the challenge of choosing the correct protective coating or lining system has become more critical than ever. Whether for mild service conditions or highly aggressive chemical and thermal environments, a single wrong decision can lead to premature failures, unplanned shutdowns, or safety risks.

To meet this growing need for fast, structured, and accurate decision support, **HEGGEL** proudly introduces **HEGGEL AI**, a pioneering artificial intelligence tool that recommends complete coating and lining systems for your corrosion protection challenges.

Unlike other AI applications that focus on detecting corrosion, **HEGGEL AI** translates decades of field knowledge into rapid, logic-based opinions to shorten the path from problem to solution.

Available 24/7, free of charge, and accessible worldwide, **HEGGEL AI** brings a new level of convenience and speed to engineers, plant operators, project managers, and procurement officers.

A System Built on Real Global Experience, Over a Thousand Projects Worldwide

The **HEGGEL AI** is not a generic assistant. It is built upon decades of practical field experience and the accumulated knowledge from more than a thousand industrial projects worldwide. These real-world installations span Oil & Gas refineries, petrochemical and chemical plants, power stations, fertilizer and mining operations, water treatment facilities, steel production, pulp & paper, and food-processing industries.

Every recommendation provided by **HEGGEL AI** reflects patterns and solution strategies validated across these diverse applications.

It does not guess; It evaluates your inputs based on hundreds of proven **HEGGEL** systems installed in the field.

The Challenge: Complex Conditions and a Smarter Way Forward

Industrial projects today operate under increasing technical complexity and demanding deadlines. Engineers must evaluate a wide range of variables, chemical concentrations, temperature cycles, mechanical stress, cleaning routines, and long-term durability requirements, all while minimizing risk and ensuring operational reliability. Traditionally, gathering this information, preparing documentation, and waiting for technical advice required considerable time and effort.

The **HEGGEL AI** fundamentally streamlines this process. Its high-speed evaluation engine delivers a structured first opinion within minutes, helping users save substantial time and cost during early project stages. By applying consistent engineering logic, the system enhances accuracy and reduces the probability of human error, ensuring that even complex environments are interpreted reliably.

Designed as an interactive digital advisor, the system can request additional details when needed, and users may continue the conversation even after receiving a preliminary recommendation. This makes it valuable not only at the beginning of a project but also during proposal refinement and internal decision-making. The intuitive design also supports non-specialist users, guiding them step-by-step through the required technical inputs.

With continuous learning from real **HEGGEL** projects worldwide, the AI becomes more intelligent and precise over time. Its 24/7 global availability ensures that users can access immediate guidance at any moment, regardless of location or time zone and beyond reducing the likelihood of human influence and error, it substantially contributes to saving both time and cost throughout the evaluation process.

Evaluation Scope of HEGGEL AI

The **HEGGEL AI** covers the full spectrum of industrial service conditions, from mild exposures to the most aggressive environments. It analyses:

- Substrate materials (steel, stainless steel, concrete, etc.)
- Operating and design temperatures
- Chemical contents, concentration, and temperature
- pH and corrosive behavior
- Mechanical stresses (impacts, mixers, abrasion, traffic)
- Thermal shocks and rapid temperature changes
- Pressure influences
- Cleaning cycles and agents
- Ambient conditions, UV exposure, and outdoor weathering
- Existing coatings and special requirements

These inputs mirror **HEGGEL**'s official questionnaire, now automated through high-tech AI.

Turning Process Data into Reliable First Evaluations

1. **Enter Your Process Conditions**
   You provide the essential engineering data for your equipment and environment.
2. **AI Requests Missing Details (Second Stage)**
   If crucial information is incomplete or unclear, **HEGGEL AI** automatically asks for clarification. This two-stage logic ensures nothing important is overlooked.
3. **AI Analysis and Interpretation**
   The system evaluates all provided parameters using **HEGGEL**'s material behavior database, chemical resistance knowledge, and logic frameworks refined from decades of experience.
4. **Tailored First Opinion**
   The **HEGGEL AI** delivers a non-binding, preliminary project-specific recommendation for a suitable **HEGGEL** coating or lining system, including:

- Product recommendation
- Recommended thickness
- Application method
- Layer design explanation
- Technical notes and special conditions

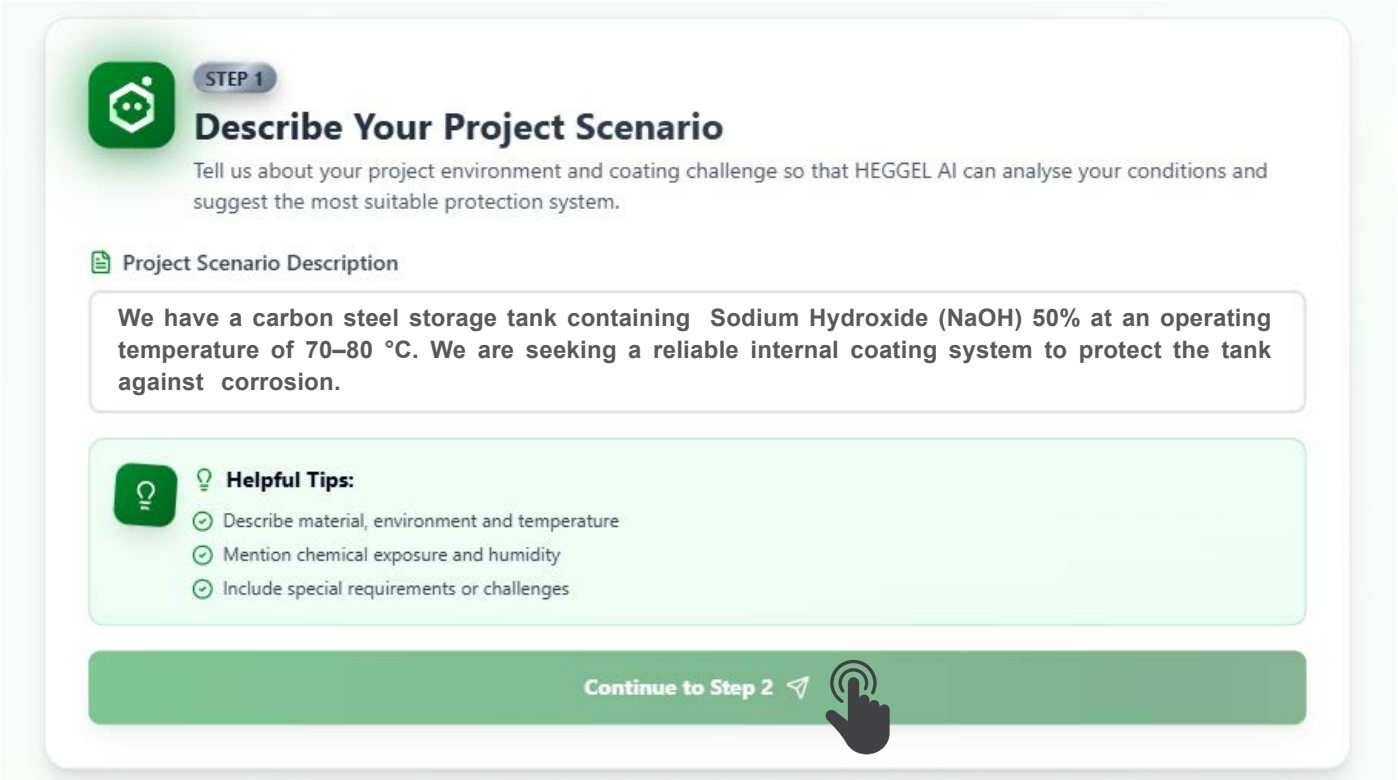
This gives users an immediate technical orientation before requesting an official engineering review.

Benefits at a Glance

The **HEGGEL AI** delivers a fast first opinion in minutes, helping users quickly identify suitable protective systems before requesting an official review. Available 24/7 and built on the logic of more than a thousand global **HEGGEL** projects, it supports both mild and highly aggressive environments with reliable, engineering-based insights. It streamlines early decision-making, prepares users for technical discussions, and accelerates project planning with immediate, data-driven guidance.

Case Scenario: AI-Based Evaluation in Practice

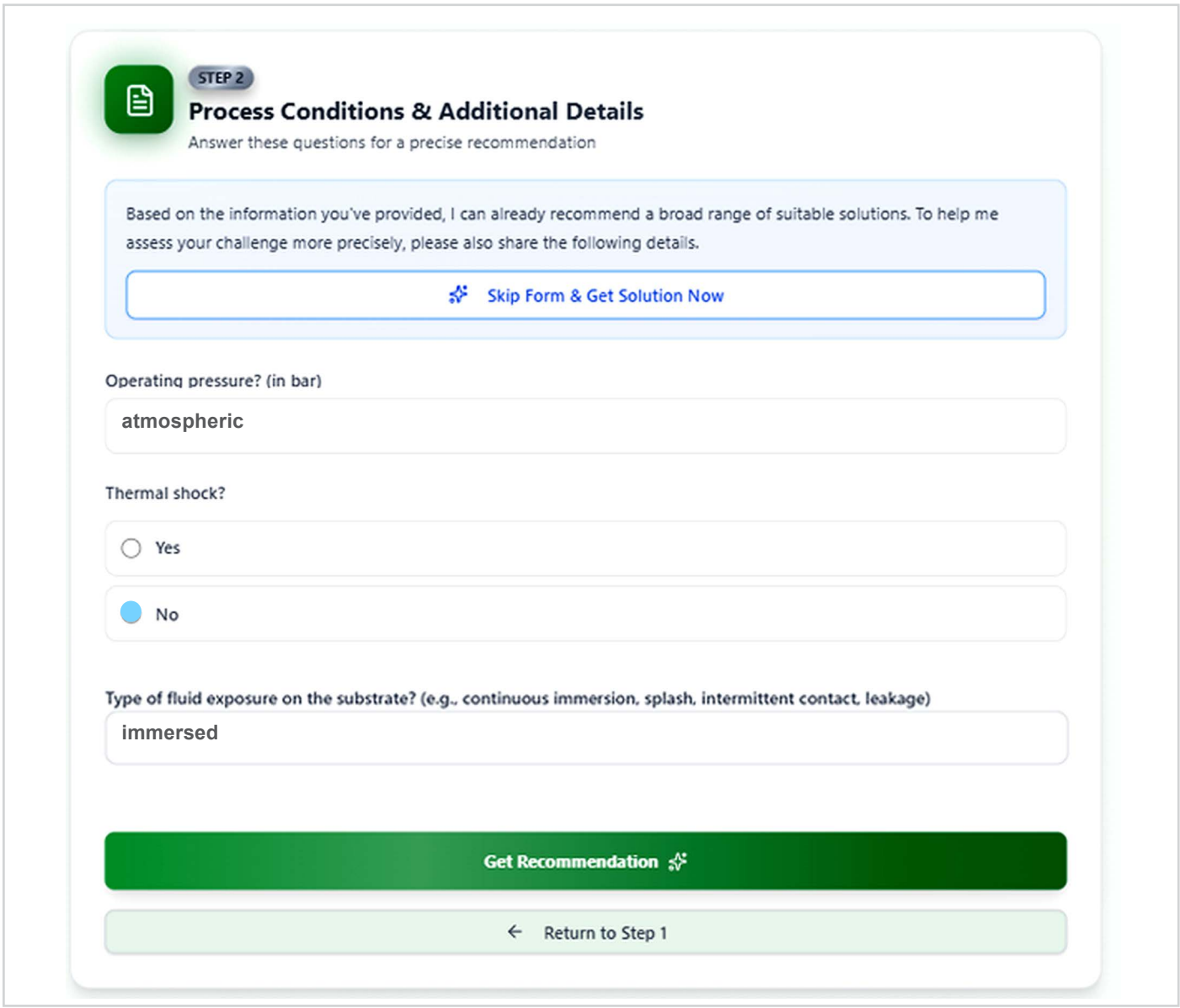
Assume a customer has requested HEGGEL's recommendation for an internal corrosion protection solution. Based on the information entered on the HEGGEL AI page, the following request was submitted:



Upon receiving this initial information, the **HEGGEL AI** identified the scenario as a highly alkaline environment with medium thermal fluctuation.

Second-Stage Clarification

Based on the initial request, **HEGGEL AI** detected that several essential parameters were missing and therefore asked the customer to clarify the following points:



After these clarifications were provided, **HEGGEL AI** completed its analysis.

AI Preliminary Recommendation

The system recommended:

- HEGGEL Corr 211 at Approx. 800 µm DFT

This fast, data-driven first opinion enabled immediate internal discussion and prepared the user for official consultation with **HEGGEL**'s technical team.

Thank you for reaching out to HEGGEL. We understand you require a reliable internal coating system for a carbon steel storage tank containing Sodium Hydroxide (NaOH) 50% at an operating temperature of 70–80 °C under continuous immersion and atmospheric pressure.

Based on your specific requirements and our extensive project database, we recommend the following system:

Product Recommendation

- **Product Name:** HEGGEL Corr 211 Spray
- **Recommended Thickness:** 800 microns DFT

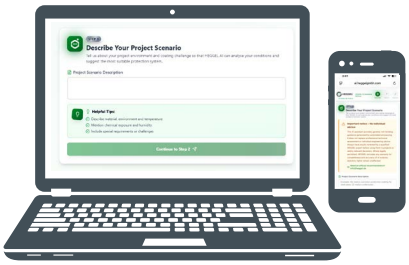
Application Method

1. Surface Preparation

- Begin by grit blasting the surface to remove any previous coating, followed by high-pressure water jet cleaning to eliminate surface chemical contaminants and soluble salts.
- Allow the substrate to dry, then re-blast the surface with angular grit to achieve a minimum blast profile of 75 microns and an SA 2.5 level of surface cleanliness.
- Clear away any remaining dust and grit.
- If the surface has been immersed in salt water, it requires grit blasting, a 24-hour rest period, and then a fresh water rinse before undergoing another blast.
- New surfaces must be meticulously degreased prior to the final grit blasting.

Important Notice, Preliminary Guidance Only

HEGGEL AI provides general, non-binding recommendations based solely on the data entered. It is intended as a first step and does not replace professional engineering judgment or an official **HEGGEL** recommendation. Before any procurement, specification or safety-critical use, AI-generated results should be reviewed and confirmed by **HEGGEL**'s engineering experts to ensure they meet your specific requirements and regulatory standards.



Start Using the HEGGEL AI Today

Fast. Intelligent. Practical. Designed to support you anytime!
HEGGEL AI helps you take the first step in identifying suitable coating or lining systems based on your application requirements.

Access the platform here:

https://ai.heggelgmbh.com/

For official technical recommendations, please contact our technical team to discuss your requirements in detail.

HEGGEL GmbH
You Build, We Protect!
www.heggel.de
info@heggel.de
+49 211 2730 4700