

Guide to a certificate for reinforced steel Bars/Coils according DIN (DIN 488-1, DIN 488-2/-3 and DIN 488-6) for Germany and according BRL 0501 with NEN 6008 and EN 10080 for the Dutch KOMO certificate.

What are the steps? The certification process for the German Ü-Zeichen is owned by Kiwa GmbH. You'll receive an agreement, specific information such as the regulation and general terms for the two separate processes and owned by Kiwa GmbH and Kiwa Nederland b.v. Therefore you'll receive agreements, specific information such as the regulation and general terms for each certification scheme. This is mandatory to us as an accredited certification body. Beside this Kiwa Germany will combine as much as possible to serve the customer and minimize costs and audits. Therefore we are working together closely scheme. This step is mandatory as an accredited certification body.

- 1. The manufacturer has to apply for a certification.** He has to fill in 2 application forms, One for the German and one for the Dutch certification scheme; This is mandatory that Kiwa, as an accredited company, has to check if we can deliver the service which is requested.
- 2. We need to know:**
 - The data of the producer.
 - The exact production place(es)?
 - Is the steel produced in one or more mills or is it only purchased? The way of production (hot rolled water cooled, hot rolled micro alloyd,.....)
 - The diameter range (for example from 8mm up to - 32mm).
 - The ductility class B 500B? (B500C is not included in DIN 488 but on request a special approval "bauaufsichtliche Zulassung" could be granted).
 - All ductility classes would be tested.
- 3. Kiwa will write a certification combined agreement** (quotation) which must be signed by the applicant. What we need to know: The complete data of the manufacturer, this will be defined in the certification agreement; the specific diameters which must be certified.
- 4. Before the certification** of the reinforced steel could start, the **manufacturer** shall contact the German DIBt to apply for a unique identification mark which is rolled on the surface (ribs) of the reinforced steel. This mark shall be used when the company is delivering the steel to the German or Netherland construction market. The rolling mark will be granted by the DIBt. It consist of a country and company code as described in the EN 10080 and DIN 488-1. In case the manufacturer wants to roll an additional company sign on the surface of reinforced steel, it's not possible to certify for Germany according DIN 488. But on request a special approval "bauaufsichtliche Zulassung" granted by DIBt could be possible. This would be meaning an increase on the costs.

5. After receiving the unique rolling mark from the DIBt, the manufacturer can start rolling the steel with that mark. After the first batches have been rolled the first test results are to be determined in the factory's own laboratory. Kiwa will review these results before visiting the company. We recommend the following: The mill should roll the first diameter e.g. $d = 20\text{mm}$. A quantity of 20 tons would be sufficient. The lab of the manufacturer should test that diameter and check it according to the German and Netherlands regulations. This will be the basis of our discussion. Parallel, 5 samples of that diameter could be sent to our lab in Berlin. We would test them and handle them with our highest priority. We could perform the tensile test, rib geometry, fatigue testing and judge them according to the German and Netherlands requirements. From this point on we will have a basis for a discussion and can give our remarks. This is helpful because we could prevent rising costs if the requirements wouldn't be met.

6. Certification process on-site: initial investigation

After receiving the unique identification mark from the DIBt, the manufacturer can start rolling the steel with the mark. During the certification process, Kiwa shall visit each production site for the initial investigation. The initial investigation includes the judgement and implementation of the documented quality system. The audit will take two days/mill, if possible. During these visits samples of the reinforced steel bars/coils are taken from stock, or out of the production for testing in the laboratory of the mill. During this audit a second set of the samples will be taken for testing/verification in our laboratory in Berlin (mechanical properties, rib geometry, chemical analysis, bending, re-bending; fatigue testing). We will compare the test results of our lab in Berlin with the audit-test results of the mill. Kiwa will make a report of the judgments of the test results to the standard and from the audit in your plant. Final: If the audit and the test results meet the requirements, a positive decision of granting

- ✓ the Certificate (German Ü-Zeichen)
- ✓ the Certificate (Dutch KOMO certificate).

can be taken.

7. Periodic surveillance per year:

The frequency of visits after the issuance of the certificate is set to 3 visits per calendar year. During these visits, Kiwa will check the implementation of the quality system as mentioned in your internal quality control-schedule, verify your internal test results to the standard and take samples of manufactured products for testing in your laboratory. During the year, Kiwa will take samples for testing in our laboratory

8. Estimated time for the initial investigation and granting the certificate for one production site:

Based on our experience we are calculating 4-6 month, but it also can take even longer if there are nonconform results of testing and additional visits and sampling could be necessary. In that case, additional sizes have to be manufactured and an extra visit to be performed. If there are no nonconformities raised during the initial inspection and samples were taken, it will take 2-4 month after receiving the samples in Berlin for testing (if the results are OK)

9. Combination possibilities: Kiwa is a global organization delivering Testing Inspection and Certification (TIC) services. To get your reinforced steel certified for the larger market you can combine the Ü-Zeichen according to DIN 488 with KOMO marking, the Finnish STF mark, FI Nordic quality labels and voluntary certification. Kiwa strives to combine as much as possible to serve the customer and minimize costs and audits. Therefore, we are working together in our network closely (Kiwa GmbH, Kiwa Nederland B.V. and Kiwa Inspecta).

Feel free to contact us

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