

## Letter of Performance of a 300 kN steel fiber testing machine

Year of Construction: 2019  
Max. Load: 300 kN  
Test possibilities: Static bending and compression tests  
FTS- Project Number: 190398

### Laboratorio Llay Llay Ltda, Rut 77.167.570-0

Laboratorio Llay Llay Ltda. is a leader in its field in Chile and with state-of-the-art testing technologies the company, founded in 1989, has a renewed infrastructure at the service of its customers.

Laboratorio Llay Llay Ltda. offers services in quality control in construction materials, such as concrete, soils, aggregates, asphalts and fortification systems, in engineering and construction industry and in small and large scale mining. The company has a solid infrastructure in an area of 25.000 m<sup>2</sup> with facilities such as soil and concrete testing labs, concrete lab with refrigerated chamber and full-scale structural tunnel for shotcrete proficiency testing.

The laboratory is the only one in Chile with an Integrated Management System (IMS) under the ISO 17025:2005, ISO 9001:2015, ISO14001:2015 and OHSAS 18001:2007 standards.

### Description of Application:

The test machine DELTA 5-300 S was designed for the various tests on steel fiber concrete. The machine frame was built with a very high stiffness and the control system has a very fast reaction for accurate test results. Furthermore test sequences for different test applications on steel fiber concrete are possible. Therefore there are used diverse additional equipment for build inside the testing frame. Machines could be calibrated according to German calibration standards from 1% of maximum load onwards.

The adjoined software package was defined to be matching to all relevant test procedures, including testing acc. all necessary standards (EN, ASTM, DAStb, ...) for steel fiber testing.

At the commissioning and installation Form+Test technicians conducted the instructions and software training. During the training all relevant machine, safety and software functionality was explained in detail.

The test machine now has its application within the important quality check as well as for research purposes, since they must be reliable at all time during operation. The already seen results are at high precision and absolute repeatable. Also, besides the robust test results, the nearly maintenance free Form+Test system is

one of the key benefits. Requirements regarding test software and documentation met the highest standards.

Summarising the experience with the Form+Test DELTA 5-300 S machine together with the complete support and planning before and during the realisation of the project all requirements were met. We are looking forward to an uncomplicated and good cooperation as we will use Form+Test service on the machine.



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