



Integrated Bogie Workshop





Benefits from our bogie know-how

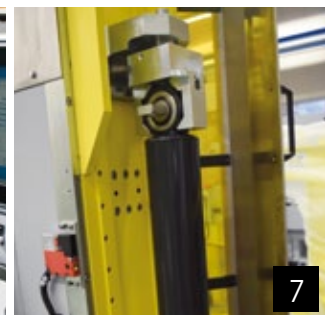
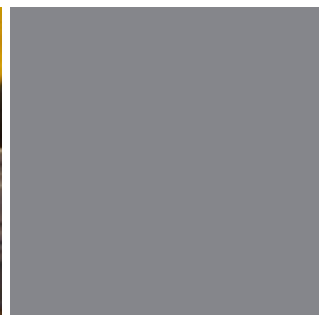
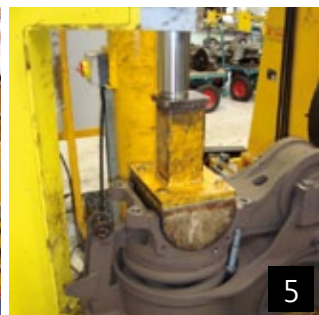
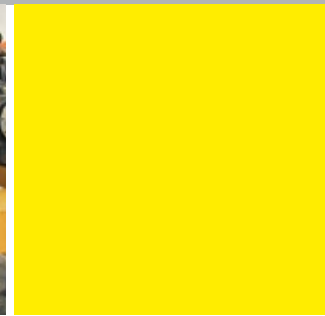
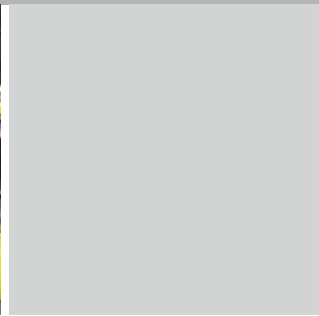
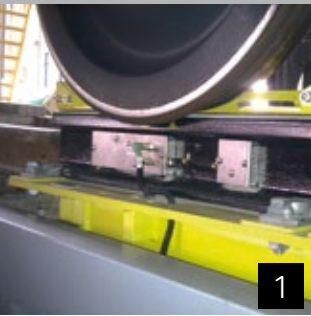
Nencki Railway Technology is a business unit of Nencki Ltd. at Langenthal, Switzerland. Since 1947, Nencki Ltd. develops and manufactures complex machines and systems with hydraulic and electric drives, which are now equipped and controlled by in-house programmed PC and software. Nencki Railway Technology has achieved a worldwide leading position with large professional competence in the branch of testing railway bogies. Nencki Railway Technology offers solutions for 2- and 3-axle bogies for high speed trains, public transport and freight cars.

The know-how developed together with our customers is consequently included into our new designs. The consequential machines are operating worldwide in the daily tough use.

Our long experience and close collaboration with our customers enables us to offer you an expert advice.

OUR SERVICES

- « Creating of concepts for a modern and efficient bogie workshop
- « Analysis of your bogie and specification for the required machines
- « Testing, checking and adjusting of bogies and components
- « Integration of partner companies
- « Production, supply, commissioning and training for components and bogie maintenance
- « Support for consultants



1 Wheel weighing facility NWW

Testing the rail vehicle for derailing safety according to EN 14363. Simulation of an uneven track and the end of a curve by warping. The test is carried out fully automatic and takes approx. half an hour. Step towards "conditioned based maintenance". Combined with wheel profile analysis. Can be installed in a pit or in raised rails.

2 Bogie exchanging system NBD

The bogie drop table is used for the exchange of single bogies, e.g. which have failed the wheel weighing test. Modular system for two or more tracks, with rail bridges, car body supports etc.

3 Bogie lifting system NBL

Safe and ergonomic assembly and cleaning work from floor level up to a height of 1,7 metres. For years also used in bogie washing cabins.

4 Assembly press yoke NBP

Movable press yoke for compression of the bogie in order to remove or re-install primary springs and for adjustment of components as well as other work.

5 Mobile press NMP

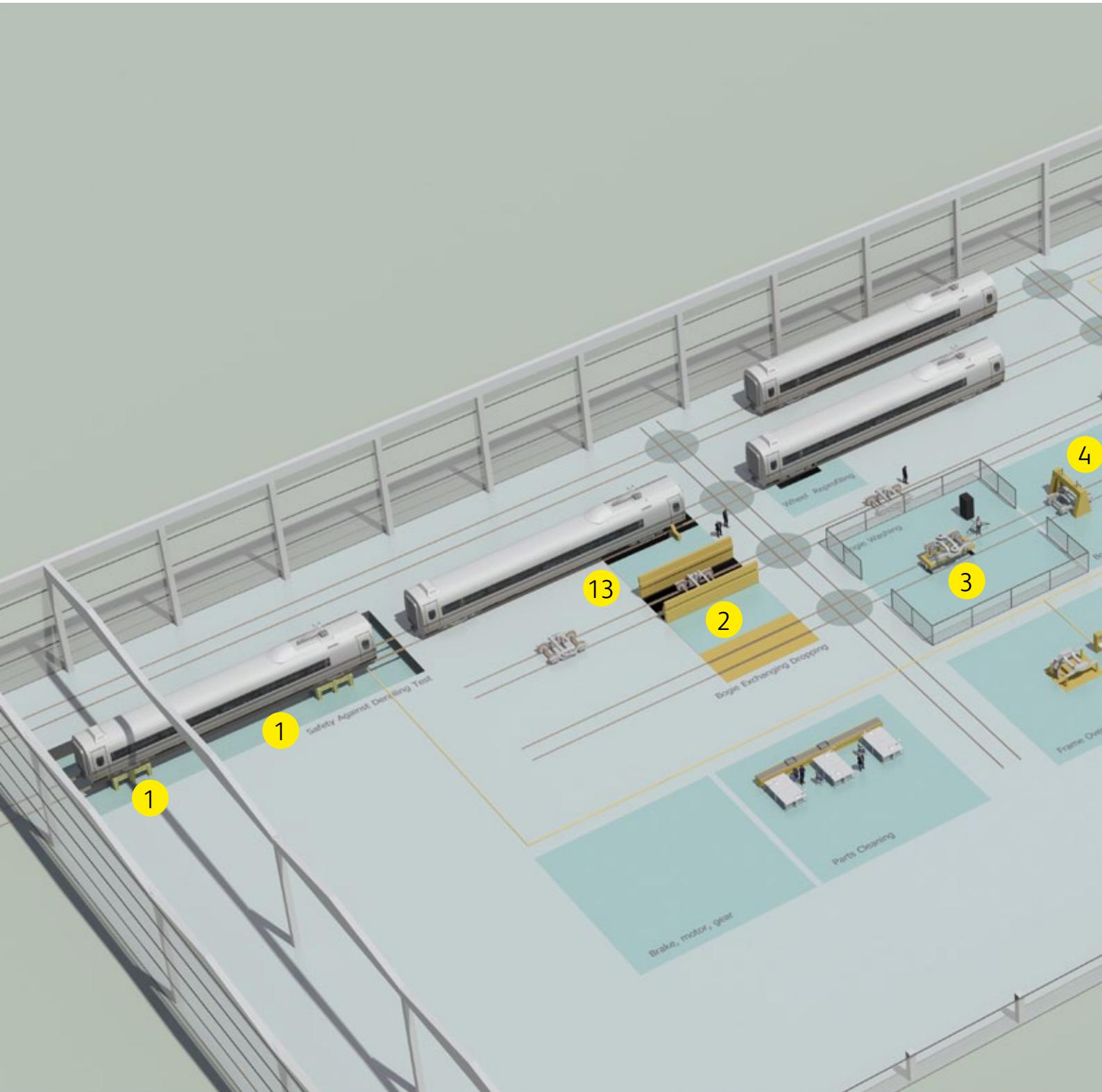
For the simple and fast assembly and disassembly of primary springs etc. Movable and height adjustable.

6 Spring test press NST

Checking the quality of springs for reuse. Testing of helical, conical or chevron springs. Axial test and optional also deflection and lateral stiffness. Classification in categories and pairs, also for new springs. The proper tested spring is basic for a correct adjusted bogie and a safe vehicle.

7 Damper test press NDT

Dynamic test of shock absorbers in the same position as installed on the bogies. The damper is a very important part, contributing essentially for good running characteristics of the bogie. The damper helps to avoid unnecessary noise and vibrations.



- 1
WHEEL WEIGHING FACILITY
NWW
- 2
BOGIE EXCHANGING SYSTEM
NBD
- 3
BOGIE LIFTING SYSTEM
NBL
- 4
ASSEMBLY PRESS YOKE
NBP
- 5
MOBILE PRESS
NMP
- 6
SPRING TEST PRESS
NST
- 7
DAMPER TEST PRESS
NDT
- 8
BUFFER TEST STAND
NBU

« You have the bogie – we have the solution



- 9
MEASURING BOGIE FRAME
NFC
- 10
MEASURING CORNER LOADS
NCL
- 11
BOGIE ASSEMBLY
NBA
- 12
BOGIE TEST STAND
NBT
- 13
RE-INSTALL BOGIE ONTO VEHICLE
NBD
- 14
MEASURING WHEEL LOADS OF THE COMPLETE VEHICLE
NWL
- 15
BOGIE DATA INTEGRATION
NBI



9



12



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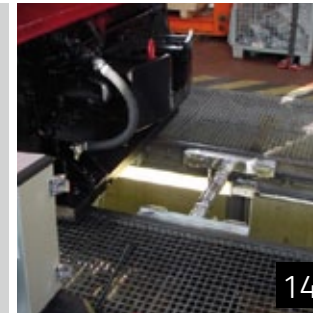
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11



14



8 Buffer test stand NBU

Disassembly and assembly of buffers and checking the rigidity.

9 Measuring bogie frame NFC

During a major service or especially after an accident, important points on the frame are measured unstressed. In collaboration with an established measuring arm supplier, Nencki Railway Technology is able to offer a suitable proposal.

10 Measuring corner loads NCL

After minor accidents or after revisions on car bodies, the corner loads of the bogie can change. The contact force onto the bogie is newly calculated by measuring the corner load according to EN 25043-4. The test results are required later on at the bogie test stand.

11 Bogie assembly NBA

System for dismantling and re-assembly of 2-axle bogies within a small space and minimum staff requirement. Modular system.

12 Bogie test stand NBT

Empty and full load of the rail vehicle is simulated on the completed bogie. At first, the equal distribution of the wheel loads are tested and corrected if necessary. Measured and tested under load are axle distances and heights of antennae, sanding units etc., followed by adjustments if required. Nencki Railway Technology offers modular systems of test stands, from a simple low-cost version to a highly precise, flexible and technically sophisticated test stand in accordance with EN 25043-7.

13 Re-install bogie onto vehicle NBD

Can be carried out by the bogie drop table NBD as described under item 2 or by use of a train lifting system.

14 Measuring wheel loads of the complete vehicle NWL

The last check is to test the wheel loads on the entire vehicle. Possible corrections are applied by spring shims on the secondary spring suspension.

15 Bogie data integration NBI

The "Live Act" of the bogie

The test stations mentioned above are interlinked. The data are saved in a common data file and by identification of the bogie number, the spring and the damper linked up. By button click a report can be viewed, showing which bogie is equipped with which spring, damper etc. and also who has tested what and when.





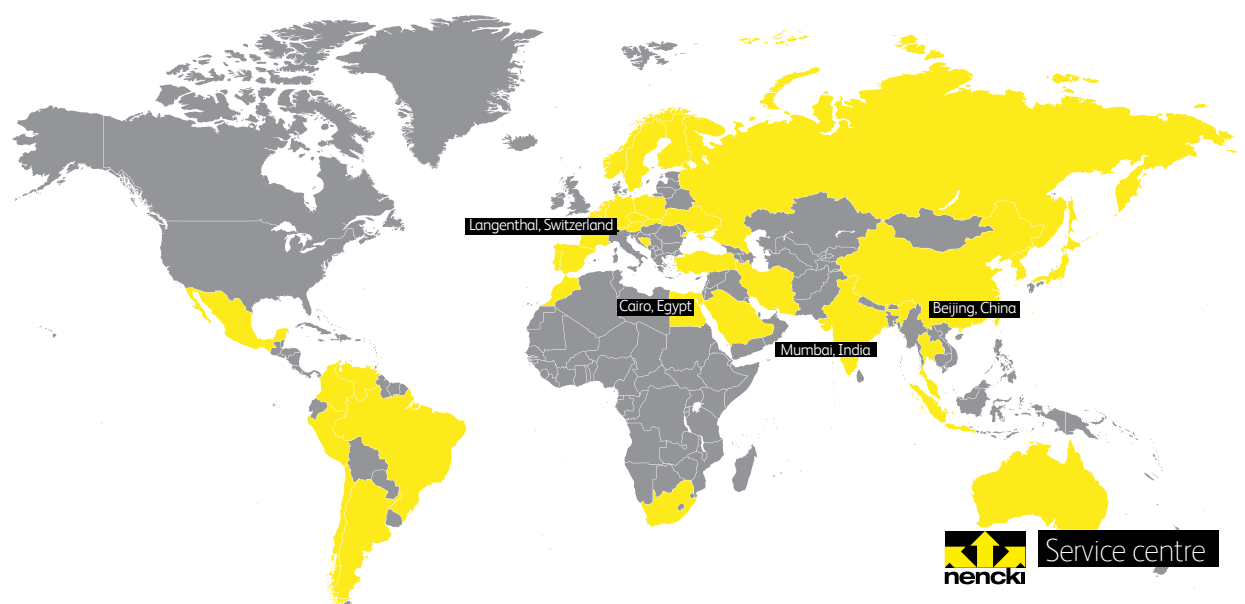
« Nencki Support

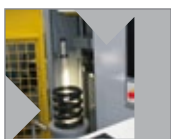
BEFORE AND AFTER THE SALE

With our partners in all the important railway markets, we are able to offer optimum advice for new testing and workshop concepts or for the modernization of such, already at an early stage. Together with our specialists of the engineering departments and the customer, we can work out solutions.

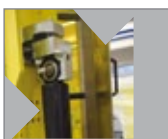
Due to international service outlets guided from Langenthal, Nencki is able to offer a fast customer support and therefore ensure high machine availability. The multi-cultural team has language knowledge in German, English, French, Spanish, Chinese, Arabic etc.

Our services include commissioning, trainings, maintenance contracts, trouble shooting by tele-maintenance, calibration, spare parts, upgrades, documentation etc. during the entire life time of the machine.





Competence in
Spring Testing



Competence in
Damper Testing



Competence in
Bogie Testing



Bogie
Handling



Machines for
Railwelding Plants



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