MÜPRO

Introduction of a Concept

MUPRO is a symbol of Progress and Quality

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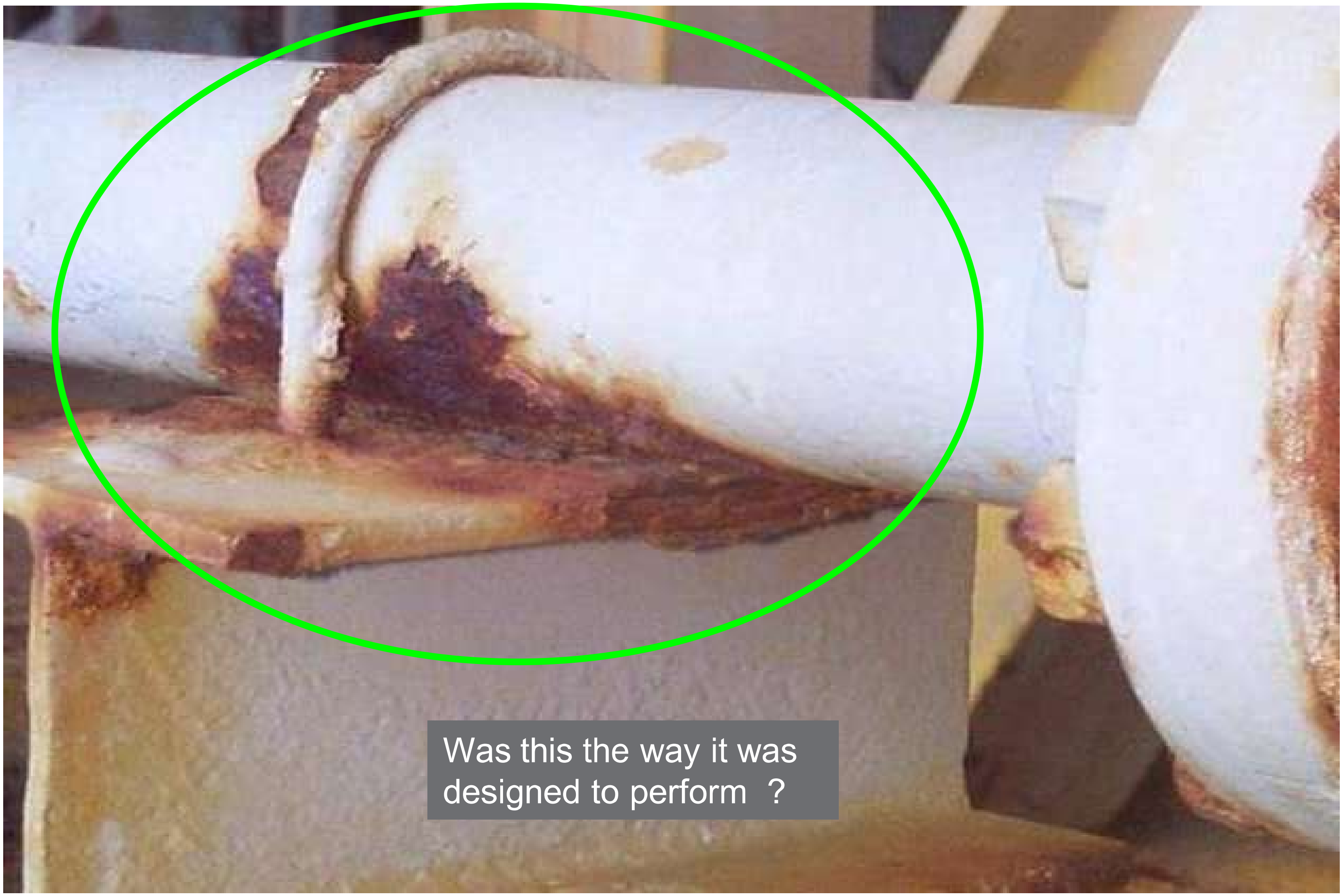
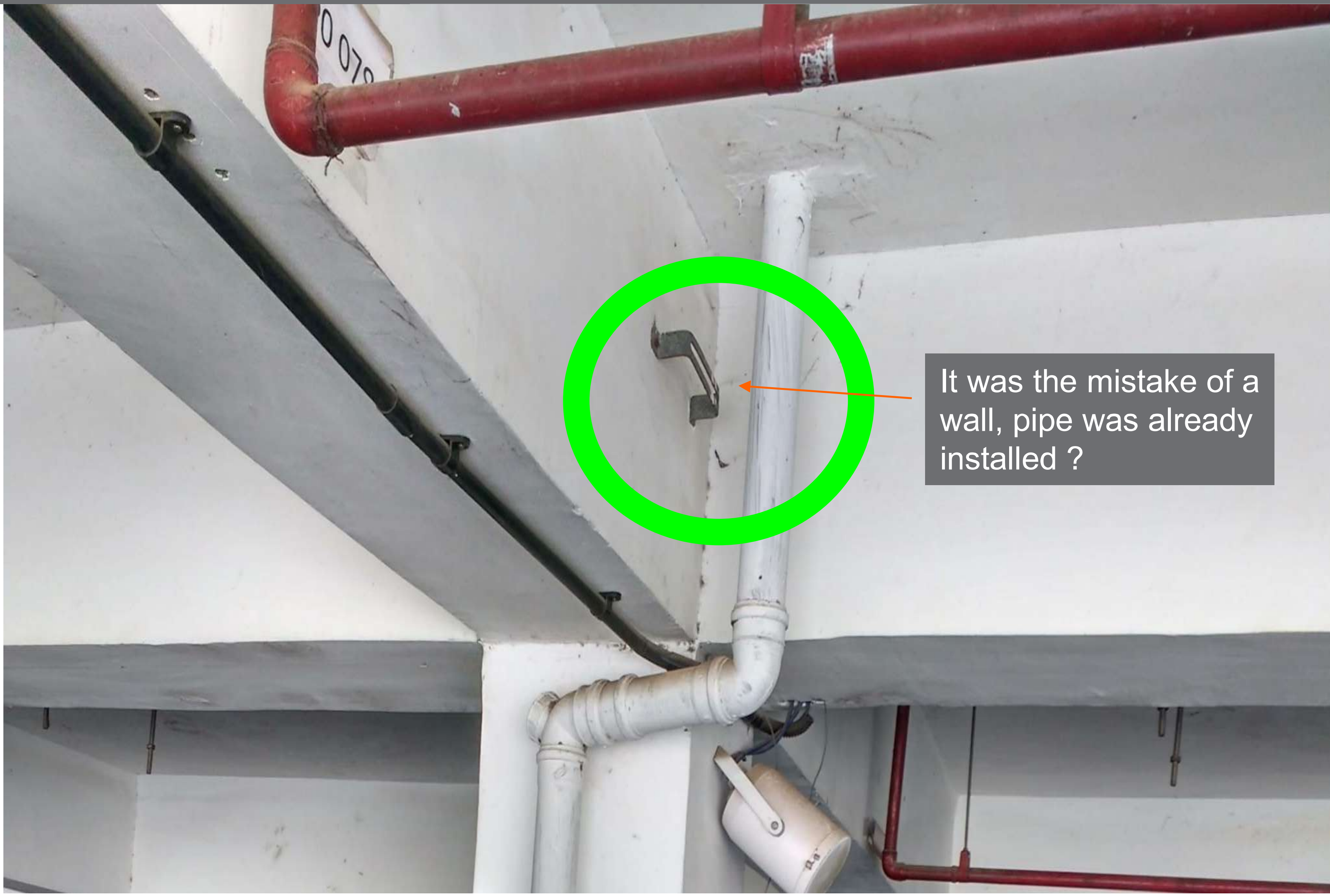
Reality of Conventional Supports



Was this the way it was designed to perform ?


What is holding what, fixing nightmare ?



It was the mistake of a wall, pipe was already installed ?

Who said U bolts don't offer fixity, they do offer to an extent to damage the pipe


Fittings and joints leak
because of improper
supporting


Yes, U-bolt does hold
the pipe in place ?


Yes, everyone sells similar looking products, but on what engineering basis ?


Pipe is sliding, why
cannot support ?

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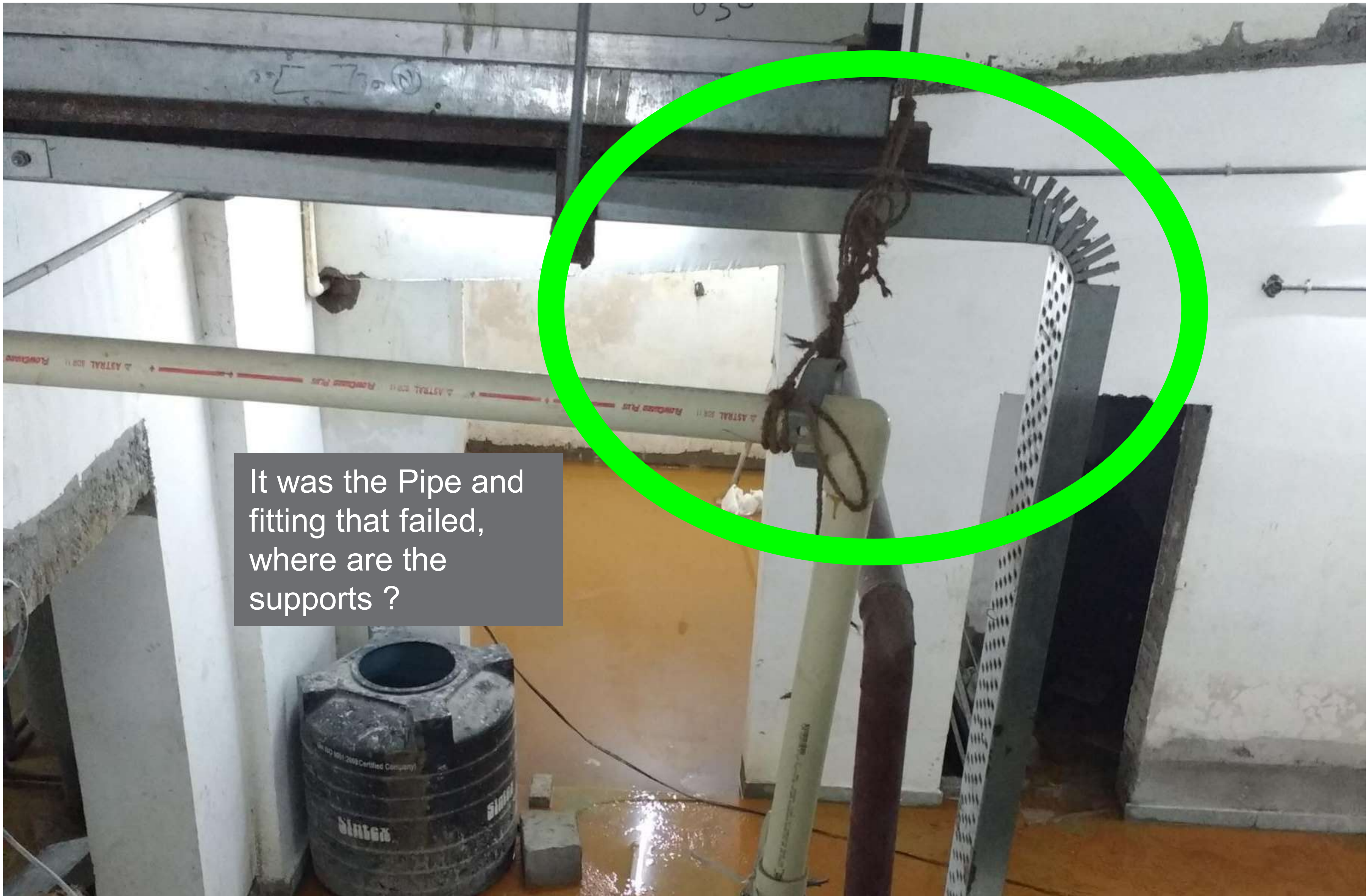


It was the Pipe and fitting that failed, where are the supports ?

Conventional supports work but for how long and for what load carrying capacity

Conventional supports work but for how long and for what load carrying capacity


Conventional
Supports best
ever solution

Why MUPRO

1. Either Weld and Waste time or Just Nut Bolt it.

Fabrication

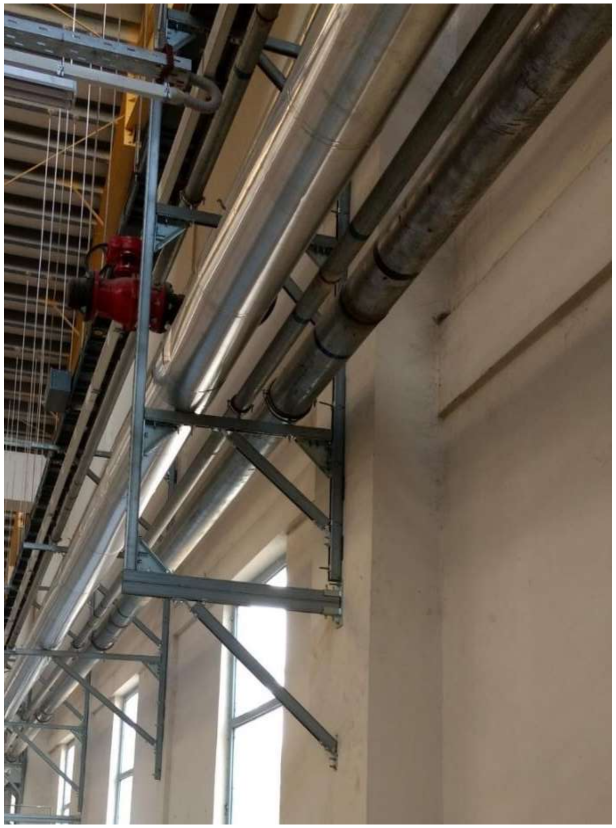
MUPRO way

Engineering Judgement or Real Engineering:

Safety, Quality, Performance as per International Standards

2. Either use Supports which are First Welded , then Painted and then installed or use Supports which are Ready to Install.

Fabrications



Assemblies

Revenue gain is time saved: In a factory, left side wall with Fabricated supports took 40 days, right side wall with MUPRO assemblies in 14 days.

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3. Either use a Low quality Material and wait for it to deteriorate or use a High Quality Material that lasts long :

Performance Unmatched – Similar looking products does not mean Equivalent Performance

4. Either use stones to keep the U Bolt Linear or use EPDM Rubber Lined Clamps to keep the Pipe Linear

Conventional Solution

MUPRO Solution

Not Flexible for super structure tolerances

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5. Either use a fabricated Support which is not Adjustable and Replaceable or use a 100 % Adjustable and Replaceable MUPRO Support

Fabrication

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Future Proof – Addition of future services possible with cold work at running and operational sites

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6. Either use Supports to increase the Number of Anchors or use Supports which are designed to exactly calculates the Number of Anchors.

Fabrication

MUPRO

Increasing number of fastening need not mean higher load carrying capacity, it can result in failure if not verified by supports supplier or a certified engineer

7. Either use Multiple Supports for one service or use Multiple Services on one Support.

Fabrication

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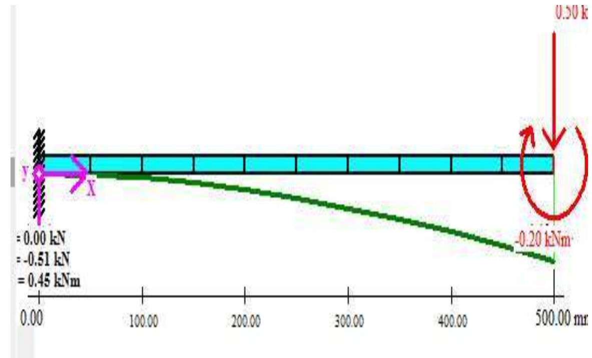
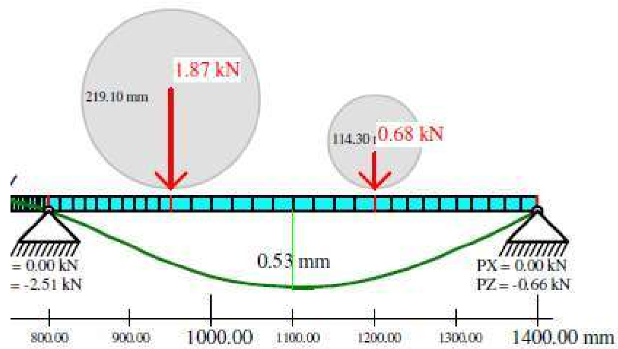
Flexibility – Support installation should be flexible as per super structure, with MODULAR approach, site modifications are quite easy

8. Either use Supports which are selected on Gut Feeling or use Supports which are completely designed using International Standards

Conventional Way





Designed Way

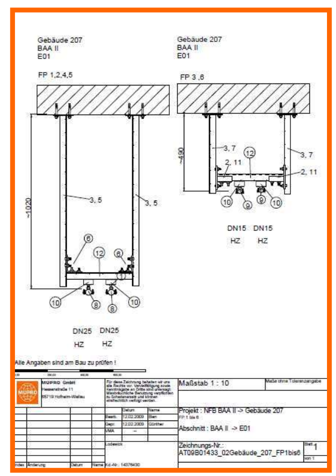
Design of Supports?

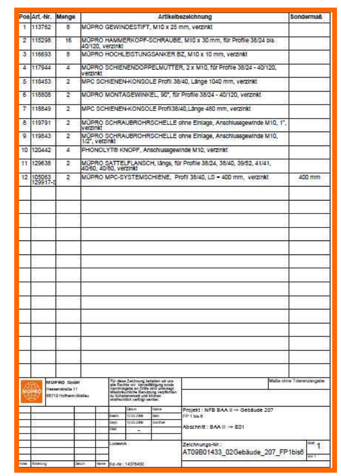
Designing Principle :

MÜPRO process management for large scale projects

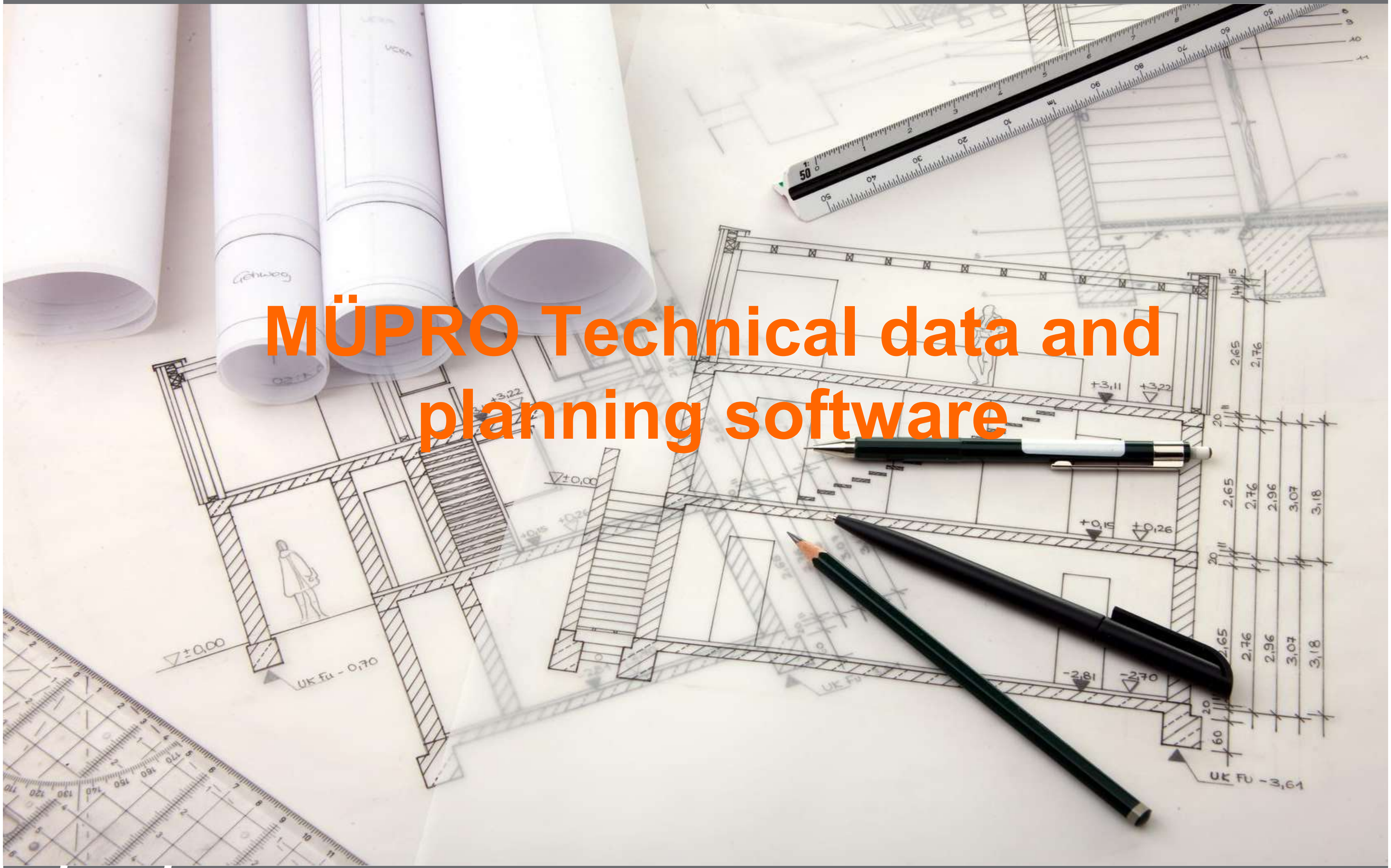
1. Project briefing and precise analysis of all requirements and specifications from Drawings
2. Calculation and selection of products from Drawings
3. Submission of the indicative budget of supports for the Project
4. Post Commercial confirmation from client.. We will share the consolidated BOQ.
5. Signing of Letter Of Intent or Purchase Order, with clear terms and conditions depicting technical approval in MUPRO's scope.
6. Detailed Engineering BOQ for respective supports will be Shared with typical Drawings.
7. Mock up and Sample submission for getting back to back approval from all stakeholders.

Engineered solution



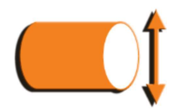


MÜPRO Technical data and planning software



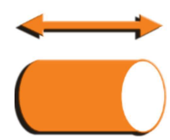
MÜPRO Technical data and planning software

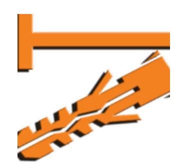
MÜPRO’s provides detailed technical data and a practical, problem oriented planning software, which supports users in solving their tasks in fastening technology.



Available data and software tools:

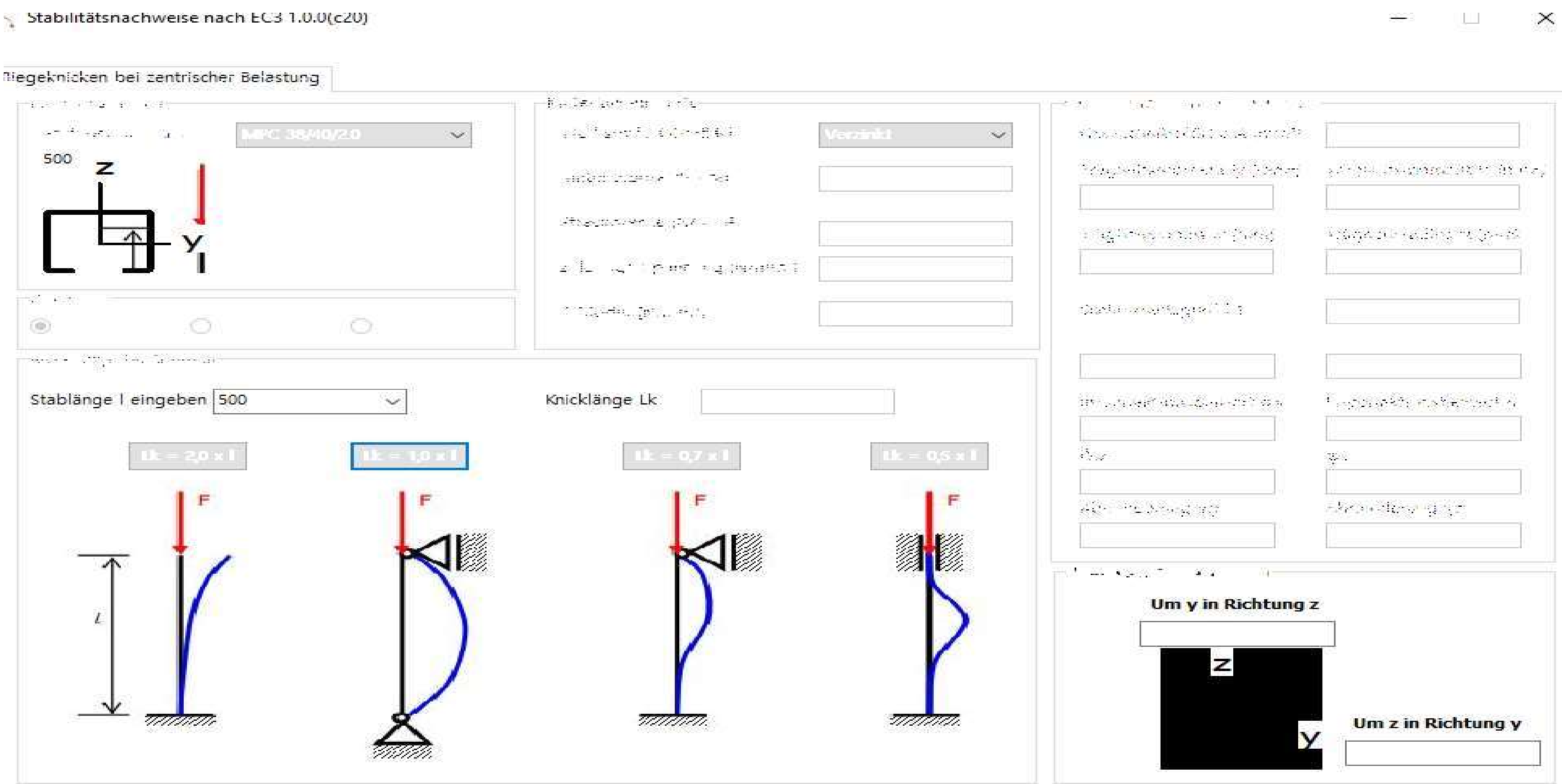
- Static documentation of the MÜPRO support channels
- Maximum recommended fastening distances for pipelines
- Load-bearing capacity for support channels, brackets, cantilever brackets, etc.
- Calculation of forces at fixed pipeline points
- Linear expansion of pipes
- Max. allowable bending loads for threaded rods
- Bearing capacity of Phonolyt® construction sets, threaded pins and threaded pipes
- Swivel hanger expansion take-up
- Plug strength for support channel brackets
- Database with cross-sections of pipes and conduits, material and insulation material characteristic values
- Creation of drawings, parts lists and service specifications
- CAD data (SAT, STEP, DXF)



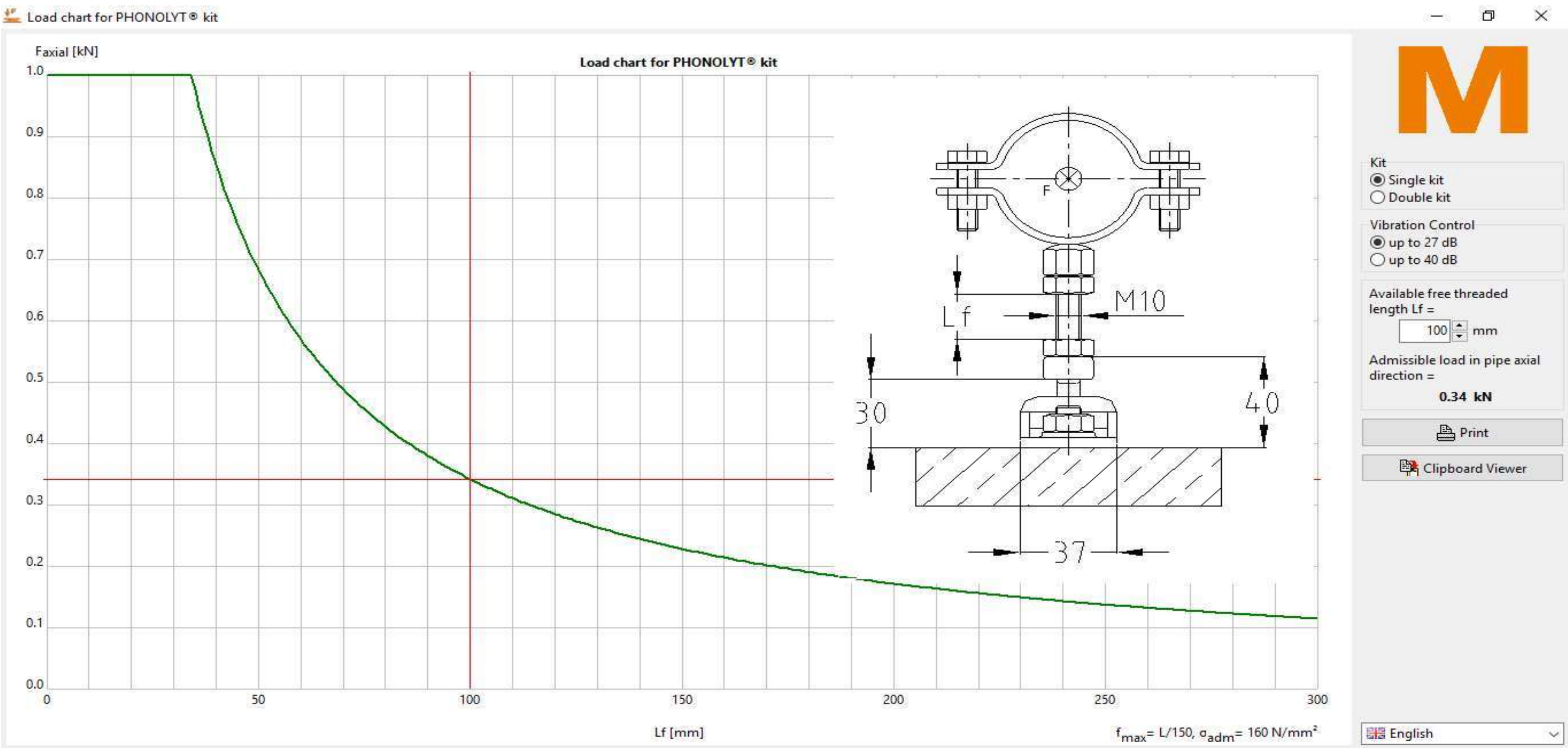


Data and software tools available for download on E-shop: www.muepro.com/shop

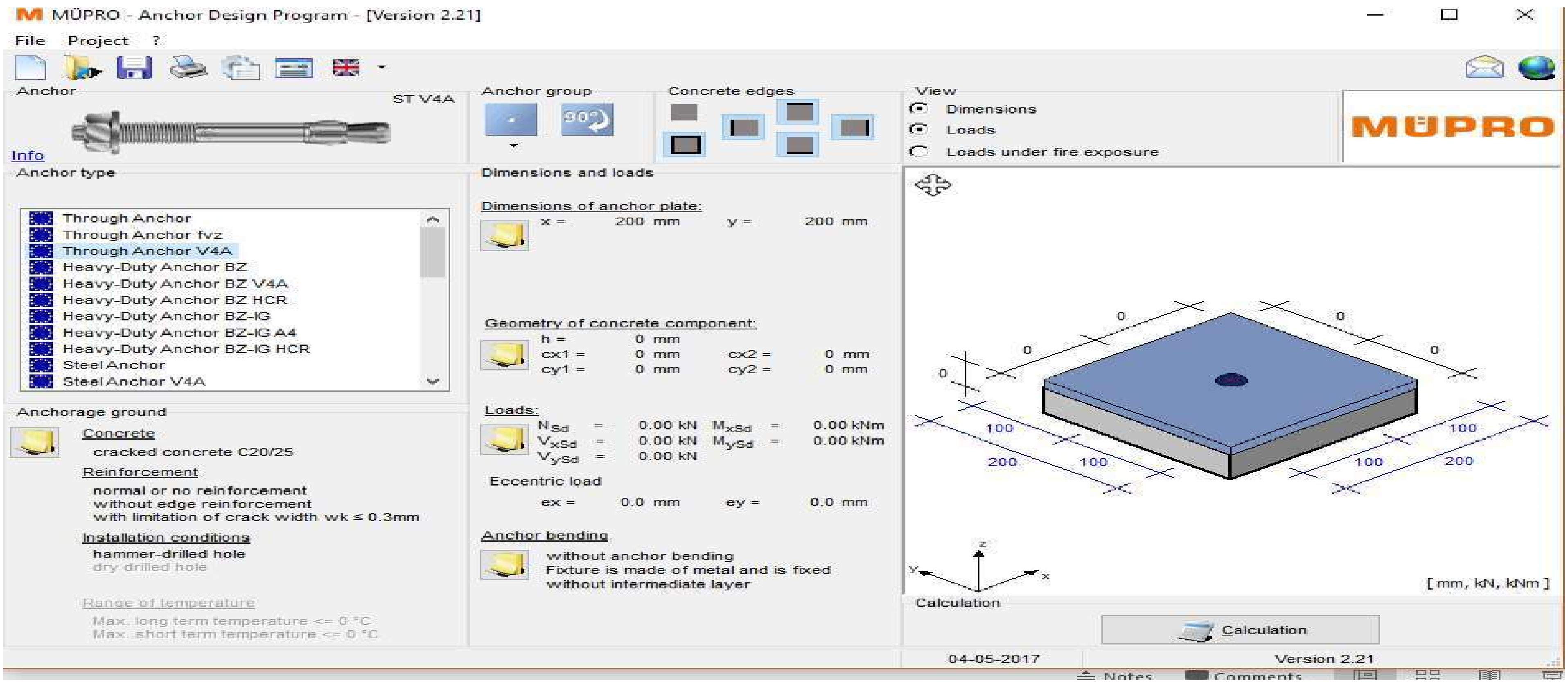
Software for Calculation of Buckling of Channels



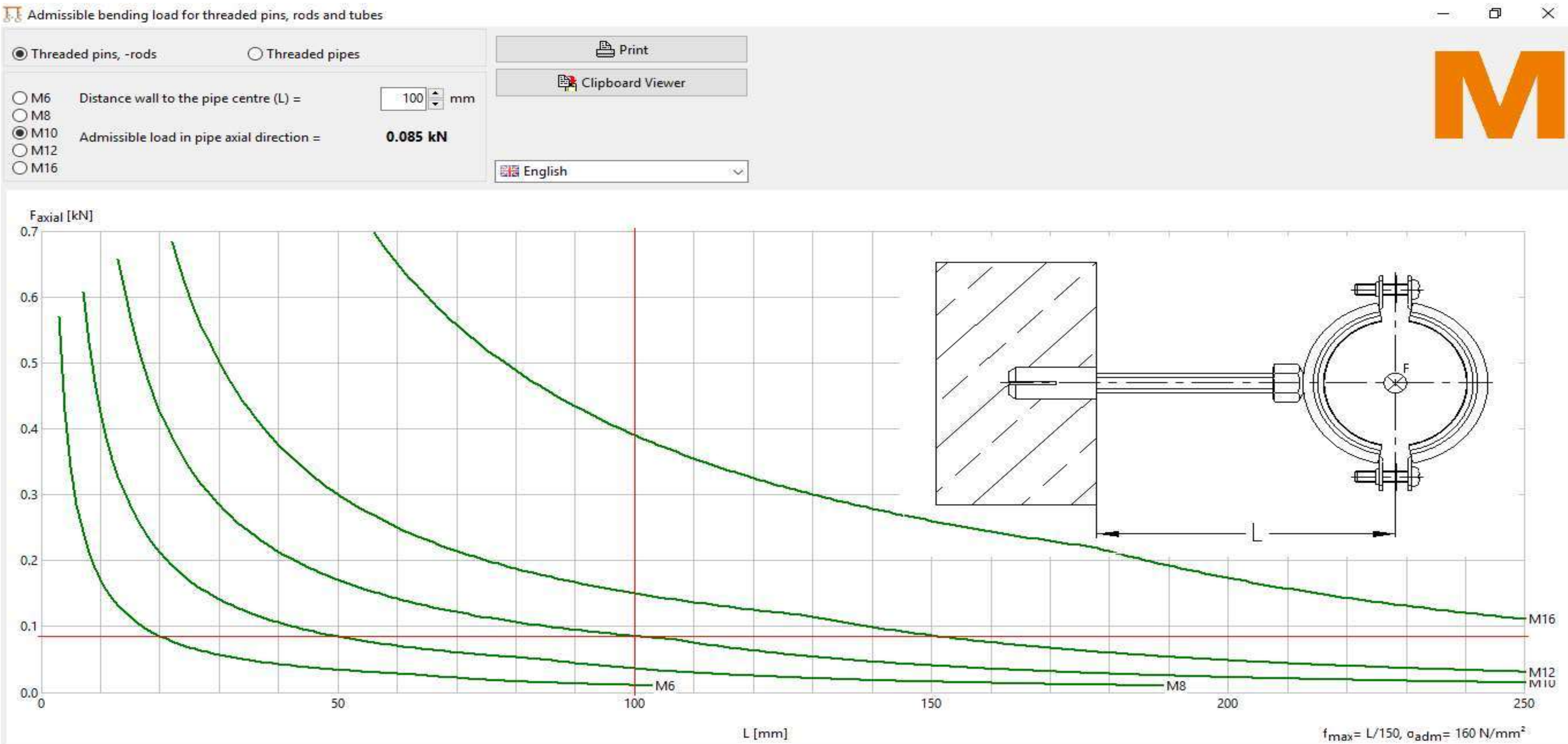
Software for Calculation of Loads in Pipes



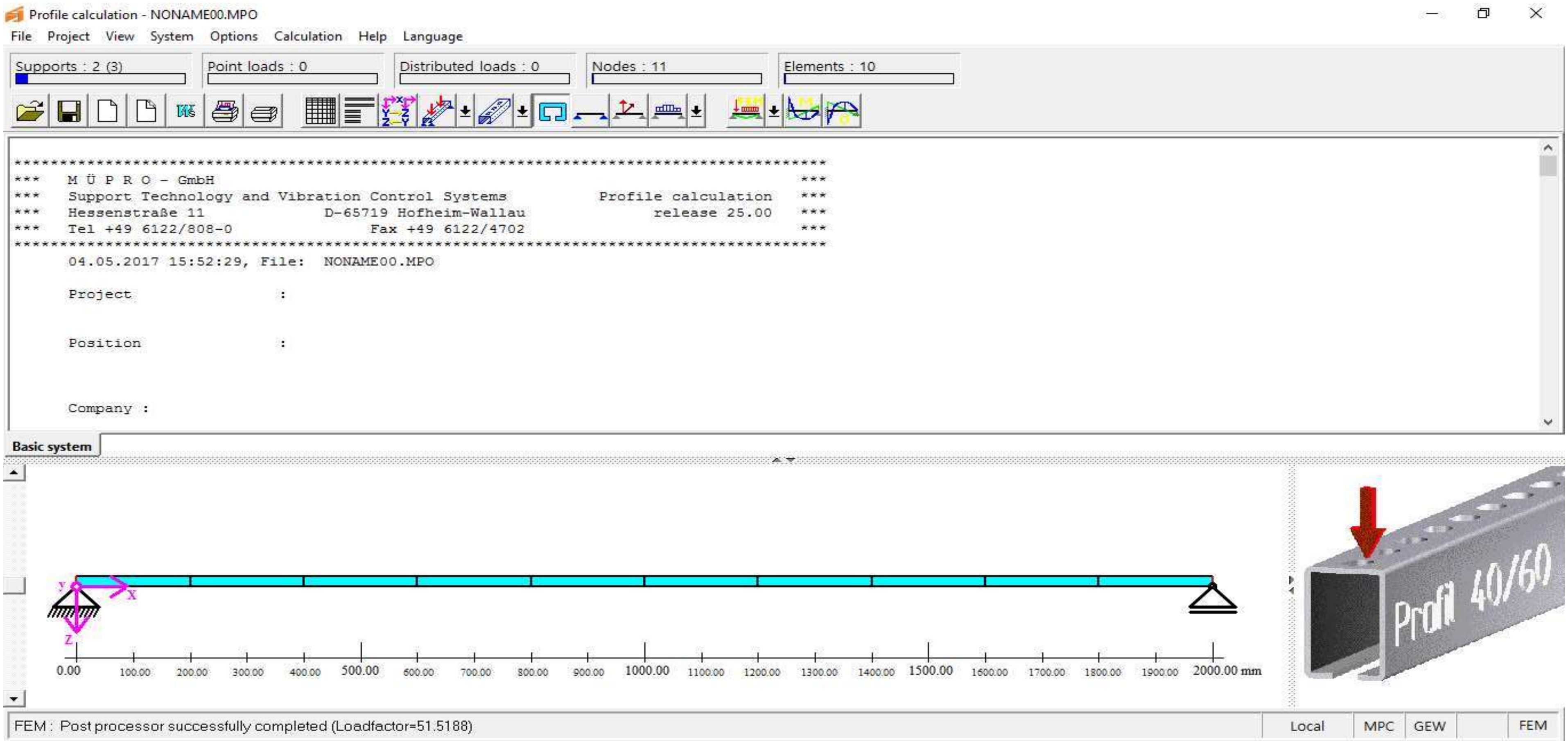
Software for Calculation of Anchor Loads



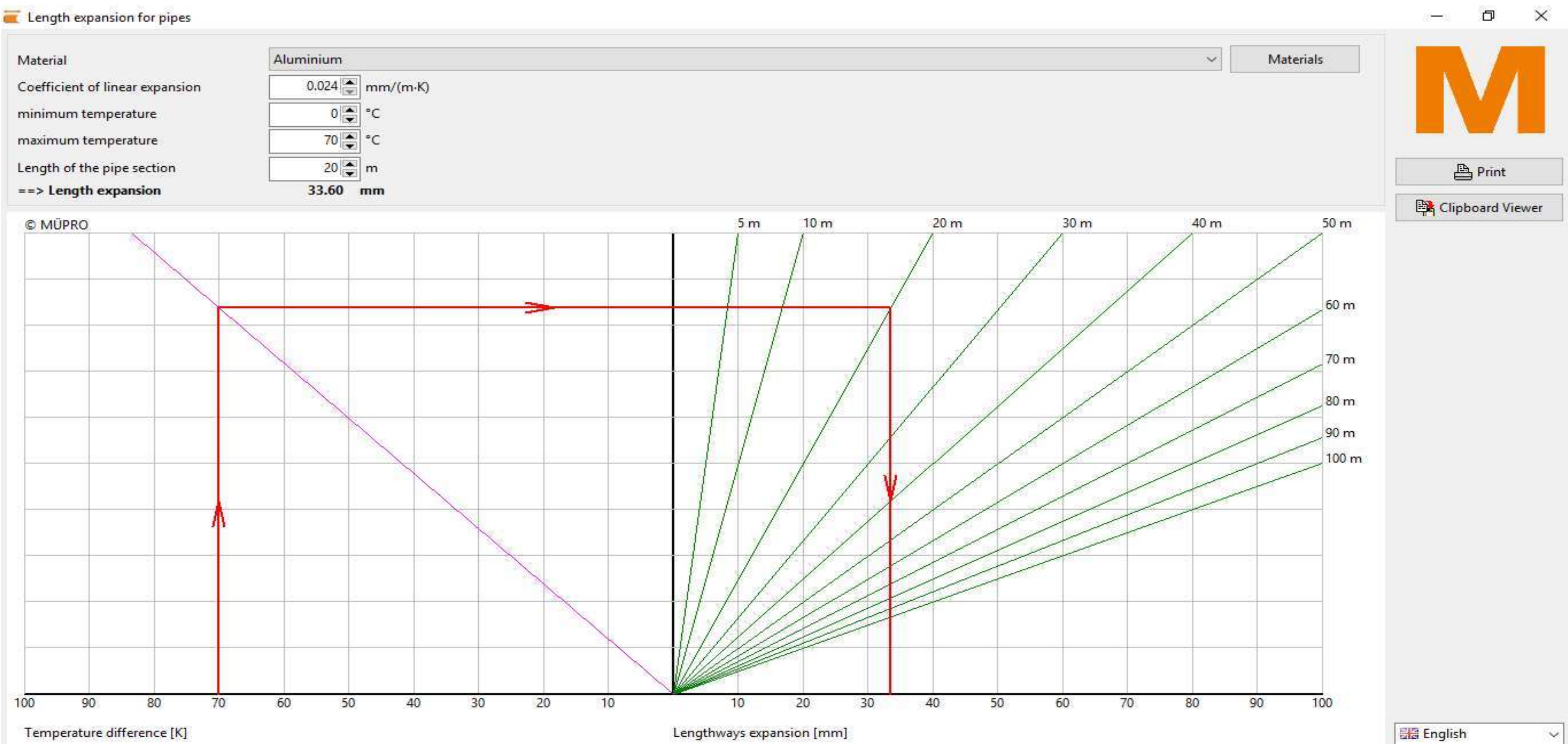
Software for Calculation of Loads on Threaded Rods



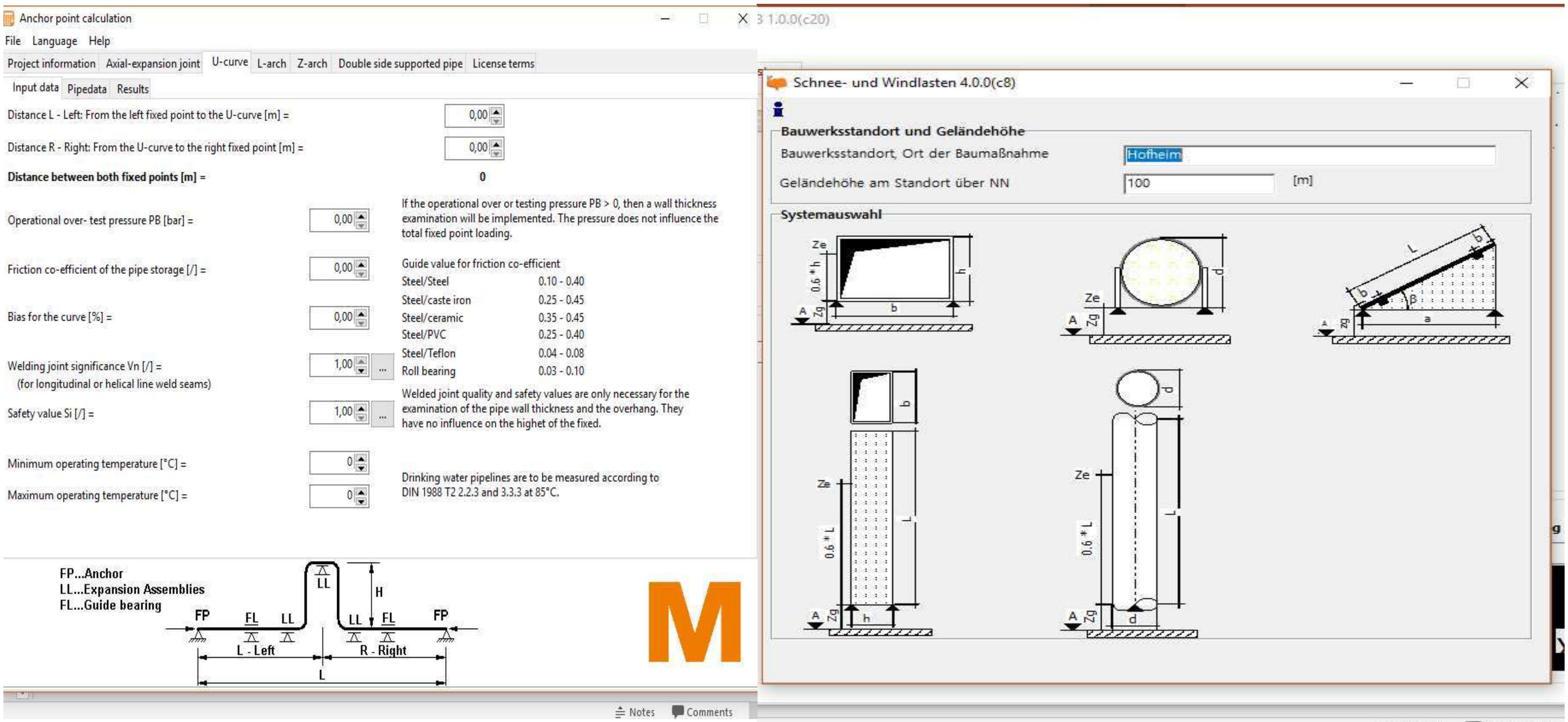
Software for Calculation of Loads on Support Channels



Software for Calculation of Thermal Expansion in Pipes



Software to Compensate Axial Expansion using curves and Calculate Wind Loads



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Software for Calculation of Seismic Loads as per IS