



LAURINI

Modified Excavator Undercarriage
to improve stability



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BUSINESS PROFILE: LAURINI

GAME CHANGER: SOLUTION FOR EVERY SECTOR

We are an Italian family-owned mechanical company specializing in the **design** and **production** of **cutting-edge machinery** for onshore and offshore pipeline sector, micro tunneling, demolition, and more.

With a **strong commitment to innovation**, we work closely with each company to provide **custom-engineered solutions** tailored to the **most challenging project requirements** worldwide.

PIPELINE

- Pipelayers
- Screening and Crushing Padding Machines
- Crawler Carriers
- Microtunneling Casing Rollers
- Various Pipeline Equipment

ENGINEERING

- Raised Excavators
- Pressurized Welding Habitats
- Lifting Beams
- Pile Centering systems
- Bollard Testing

TUNNELING

DEMOLITION

SHEET PILES

PROJECT DESCRIPTION

The “**Hydraulic Variable Gauge Undercarriage**” was developed to enhance the **safety and performance** of excavators used in pipeline projects, during trenching operations and pipe handling activities.



CERTIFICATES

ISO 9001 Quality Management System
ISO 14001 Environmental System



EMPLOYEES (2024): >70



We call ourselves **Game Changers** because we **revolutionize** every sector we operate in, **changing the rules of the game**.

FINDINGS

Modified Excavator Undercarriage to improve stability

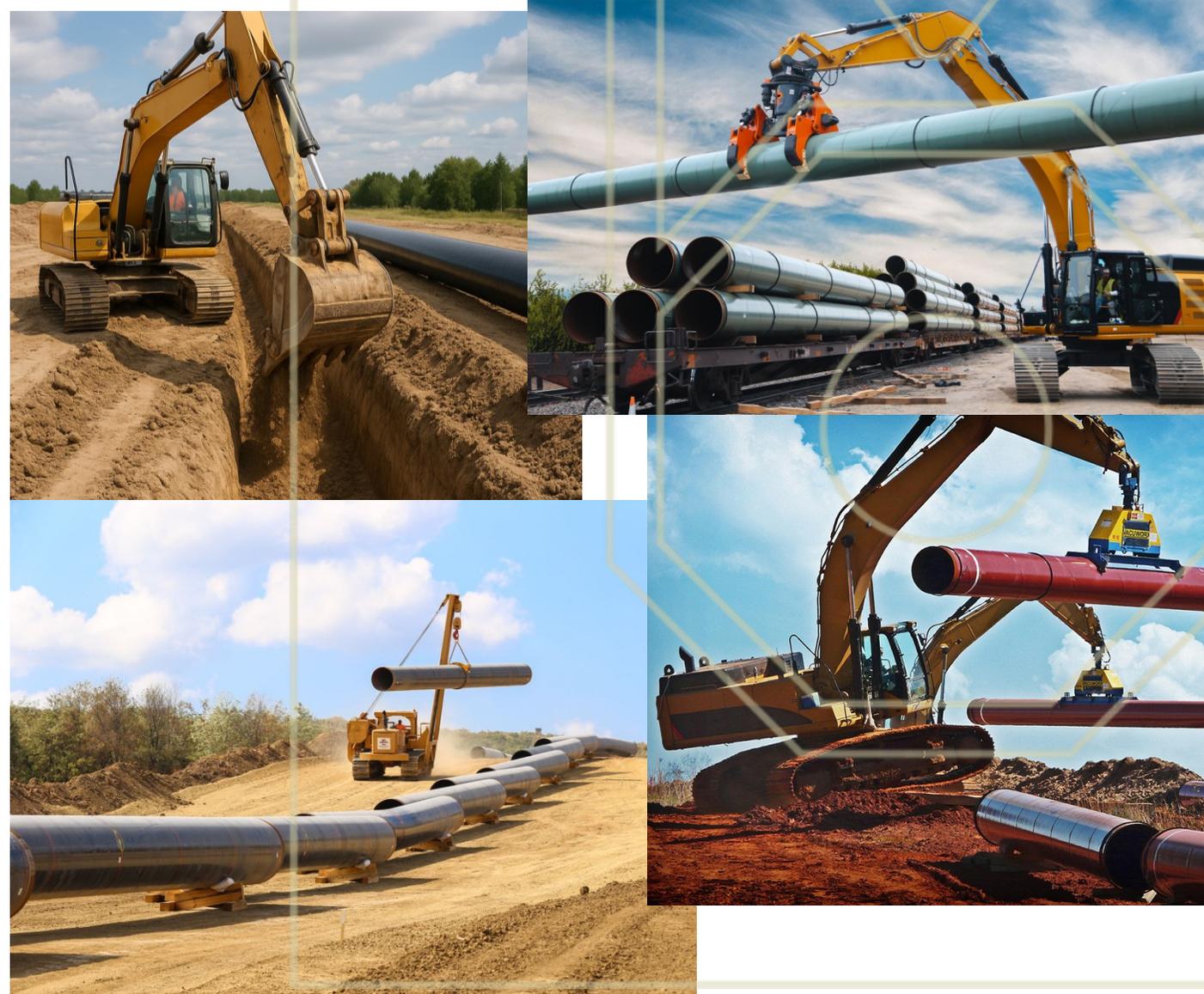
Excavators used in the construction of pipelines typically perform three main functions:

- **DIGGING, TRENCHING, SOIL COMPACTION**
- **STRINGING**
- **PIPE HANDLING**

Also, they are often equipped with various specialized tools to perform these tasks.

Leveraging our **expertise in transforming standard excavators** into high-performance demolition machines we developed an extremely versatile solution: the **Hydraulic Variable Gauge Undercarriage**.

This **extremely versatile technology** is suitable for all excavator brands, and it can be applied to excavators that use tools such as Vacuum lift, Deckhand, Roli Cradle, Roli Slings.



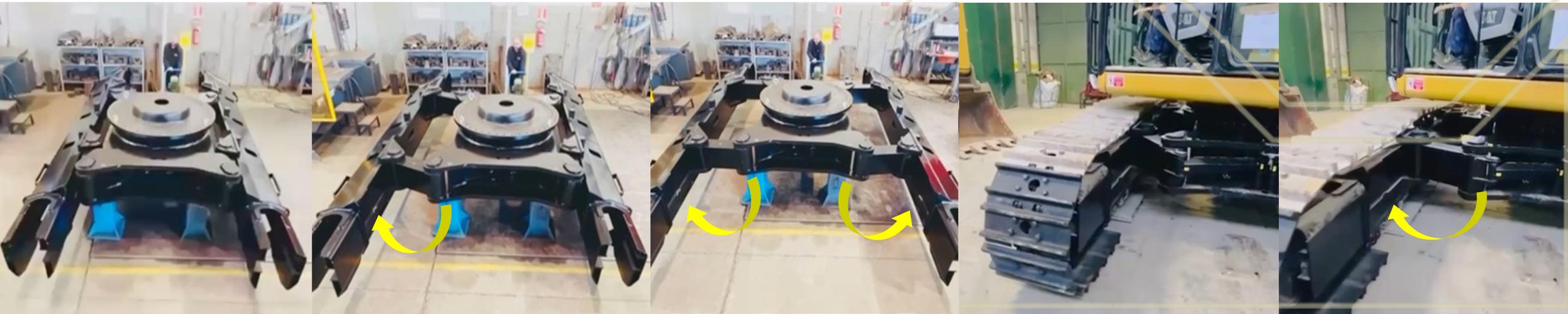
Traditional excavators must face the following limitations:

- **Limited 360° stability**, increasing the risk of tipping during pipe handling, especially with additional lifting equipment.
- **Fixed track width**, creating challenges when crossing or maneuvering along narrow Right of Way (ROW) tracks.
- **No retrofitting options available**: existing adjustable undercarriages were typically available only on newly purchased machines, leading to higher capital investment and fleet renewal costs for contractors



The **Hydraulic Variable Gauge Undercarriage** developed by Laurini introduces a versatile and highly effective solution:

- **Four hydraulic cylinders** equipped with locking valves are installed on the excavator's revolving frame, ensuring **secure locking** in both expanded and retracted positions.
- **A hinged linkage system** allows the **undercarriage to extend and retract** smoothly.
- **Extended side frames** enhance both **transverse and longitudinal stability**.
- **In-cab hydraulic controls**, enabling operators to **adjust the track width without leaving the cab**.



SOLUTIONS

Modified Excavator Undercarriage to improve stability



- ➔ It increases the machine **stability** on **steep slopes**
- **Compatible** with both **new and used excavators**, eliminating the need to purchase new equipment.
- **Increased safety:** enhanced stability during upright lifting operations.
- **Reduced footprint:** the ability to narrow the undercarriage width when encountering obstacles on ROW tracks
- **Cost-effective investment:** easy retrofit installation even on existing contractor fleets.

ACHIEVEMENTS

Modified Excavator Undercarriage to improve stability

- **+40% improvement in 360° stability**, significantly reducing tipping risks compared to standard excavators.
- **Enhanced operator safety**: no incidents recorded during field testing and early deployments.
- **Increased mobility**: significant reduction in crossing times when encountering narrow passageways on job sites.
- **Lower operational costs**: the ability to upgrade existing excavators without purchasing new machines.



ACHIEVEMENTS

Modified Excavator Undercarriage to improve stability

OPERATORS FEEDBACK



Operators praised the **ease of use** and increased **safety** offered by the in-cab hydraulic controls.

CUSTOMER FEEDBACK



Clients valued the retrofit solution as an **economical** and **efficient** way to upgrade their fleets.

The **Hydraulic Variable Gauge Undercarriage** by

Laurini Officine

Meccaniche offers an

...**innovative**...

...**reliable**...

...**cost-effective** solution

...that enhances the **stability**, **safety**, and **operational flexibility** of excavators in pipeline construction, representing a significant advancement for the sector.



THANK YOU!



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