

# Pi Makina

Automotive Industry

Turkey



**PI MAKINA**  
ERG İNŞ. TİC. VE SAN. A.Ş.  
www.pimakina.com.tr

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ANSYS® Professional™

## Overview

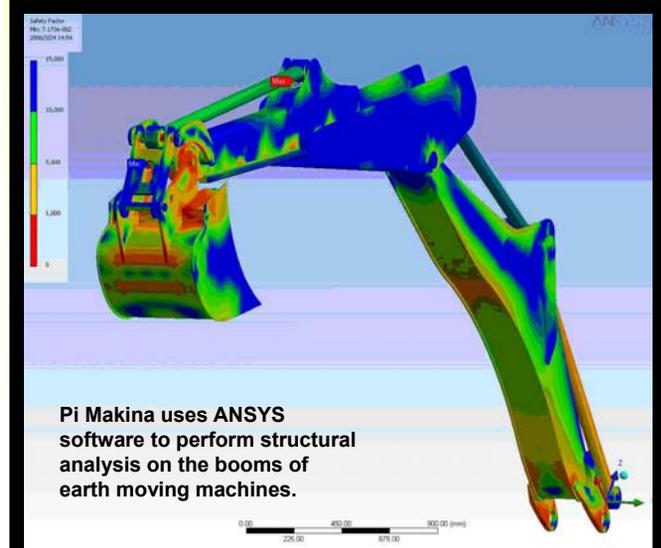
Pi Makina is a trademark of ERG Construction Company. Located in Gölbaşı, Ankara, Turkey, the company has been manufacturing construction equipment since 1972. Pi Makina has grown from a small company serving local needs to an international business delivering construction equipment all over the world. Currently, its machines are used within 25 different countries. The company's products incorporate robustness and agility in every aspect of functioning; despite such excellent quality, sale prices are respectively low. Pi Makina machines also meet the Tier certifications for engines as well as European Directive CE mark testing for other equipment. This ensures better fuel efficiency and a ready supply of spare parts.

## Testimonial

"As our business with other companies develops, customers today require higher quality products — in the construction world, that translates to more robust machines. In order to achieve this, we had to observe the structural deficiencies of our machines when exposed to random disturbances. That's how we met ANSYS.

"We had made several finite element analyses in order to acquire the structural sensitivity in the desired manner. It was crucial for us to establish a standard solver for our design problems. By using ANSYS products at our company, this essential relation was easily accomplished."

**Ender NADİR**  
R&D Engineer  
Pi Makina



## Challenge

In the case of cabin design for construction equipment at Pi Makina, the company needed to follow worldwide standards. The goal was to construct the main frame of the cabin and make progressive design applications that would satisfy the given standard strength specifications.

## Solution

Pi Makina developed an APDL code and constructed the main frame in the desired manner. In addition, the company developed an ANSYS customized user interface that simplifies their calculation method. Consequently, the results of the analyses are interpreted within the standard strength specifications.

## Benefits

ANSYS software has become a crucial tool at Pi Makina in the structural modifications of machines.

As the company increases the variety of the products produced, it checks almost every structural modification using ANSYS software before applying to its machines.