

At **Kozikas Mehanika**, we specialize in delivering cutting-edge engineering solutions for complex piping systems and process equipment. With a strong focus on innovation, quality, and efficiency, we provide tailored services to meet the unique needs of the petrochemical, energy, and pharmaceutical industries.

Our expertise lies in integrating advanced technologies, such as **AI**, **machine learning**, and **computational fluid dynamics (CFD)**, to optimize designs and enhance system performance.

### 1. Advanced Piping Design & Analysis

- Development of complex piping drawings based on P&IDs, GAs, and equipment arrangements.
- 2D/3D piping routing, modeling, and specification. Isometric drawings and bill of materials.
- Piping calculations (ASME B31.1 / B31.3 / EN13480).

### 2. Piping Stress & Flexibility Analysis

- Stress analysis using **CAESAR II** and **PASS/START-PROF**.
- Support design, dynamic/static load analysis, and vibration assessment.
- Seismic, wind, and slug flow analysis.

### 3. Process Equipment Design

- In-depth knowledge of combustion systems, burners, and skid-mounted equipment.
- Expertise in designing flare packages, **fuel gas skids**, pump skids, **chemical dosing skids**, **filtration skids**, and compression skids.
- Familiarity with leading equipment brands.

### 4. Advanced Engineering Tools

- **FreeCAD**: 3D modeling and parametric design.
- **Python**: Automation and custom scripting for design optimization.
- **OpenFOAM**: CFD analysis for fluid flow in piping systems.
- **TensorFlow & NumPy**: Machine learning for predictive maintenance and system optimization.

### Our Services

From **3D modeling** to **construction drawings**, we offer end-to-end solutions, including:

- Full design of skid-mounted systems.
- Fabrication isometric development and valve rack design.
- Manufacturing support for piping components and steel structures.
- Integration of AI and machine learning for system optimization.

### Why Choose Us?

- **Cost-Effective Solutions**: Competitive pricing without compromising quality.
- **Global Experience**: Proven track record with multinational companies and renowned organizations.
- **Innovation-Driven**: Continuous improvement through cutting-edge tools and methodologies.
- **Flexible Engagement Models**: Full-time, part-time, remote, or hybrid collaboration.

### Let's Collaborate!

Whether you need a reliable partner for a single project or a long-term outsourcing collaboration, **Kozikas Mehanika** is here to deliver exceptional results.

### Contact Us:

mehanika@kozikas.rs  
+381 64 4629737  
www.mex.kozikas.rs