

# ZenseAI.Manufacturing

Zensar's ZenseAI.Manufacturing is an AI-powered inspection platform specifically engineered for tube and pipe manufacturing environments.

It combines cutting-edge AI technology with dual-model intelligence, real-time dashboards, smart data organization, and a cloud-ready, containerized architecture, engineered for seamless industrial-scale deployment.



## Success story

### Expanding possibilities:

### AI weld inspection automation

#### Client:

A leading steel pipe manufacturer in the US.

#### Problem:

Manual weld inspection was slow, inconsistent, lacked audit trails, and couldn't scale to full coverage without major workforce expansion.

#### Solution:

Deployed a containerized AI platform with dual-model architecture, real-time processing pipeline, shift-based data organization, interactive React dashboards, and enterprise features (authentication, monitoring, feedback loops).

#### Impact:

- **100% coverage** with over 97% accuracy
- **24/7 continuous operation** with zero downtime
- **Faster inspection times** - from minutes to seconds
- **Complete audit compliance** with automated logging

## Services Offered

- **Instant quality control:**
  - Continuous 24/7 monitoring of weld quality
  - AI-powered defect detection in real time
  - Instant classification: Good or bad weld
- **Data-driven insights:**
  - Automatic organization by date and time
  - Historical data exploration and trend analysis
  - Statistical dashboards with defect rate tracking
- **Secure multi-user platform:**
  - Multi-user authentication with role-based access
  - Real-time component health tracking
  - Automated alerts for system

## Benefits

- Automated defect detection reduces inspection from hours to seconds
- Delivers 95%+ defect detection accuracy, ensuring consistent quality and reducing the risk of missed anomalies
- Eliminates the need for manual review of hundreds of images daily, reducing up to 80% of QA effort

To connect with our experts and know more, please reach out to us at [cloud\\_transform@zensar.com](mailto:cloud_transform@zensar.com)

## Zensar services



Application services



Artificial Intelligence



Cloud Infrastructure and Security Services



Data engineering and analytics services



Marketing and engagement



Product and Platforms