

# Pipeline Decommissioning

The study analyzes the standards

## Introduction

After the 80s many oil power plants, were converted to gas, hence, many Companies, belonging to the Oil&Gas or Power or Chemical field, no longer use some onshore pipelines built in the 40s-70s.

The main questions of all the stakeholders are the following:

- **Is it possible to abandon a Pipeline?**
- **What is legal obligation?**
- **Which standards, guidelines can be followed in order to abandon oil and gas pipelines in an environmentally sound, safe, and economical manner?**

## Normative Analysis

Streamline Engineering srl helps the Companies to answer these questions.

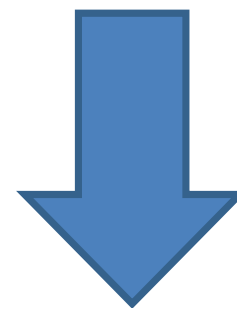
First of all, we execute a normative analysis, taking care of the Italian Country and local legislation.

Typically no detailed rules are applicable to this kind of problem.



## Environmental Law

Therefore, if there is not any law or international standard that bid to physical pipeline removal, is it possible to left it in place?

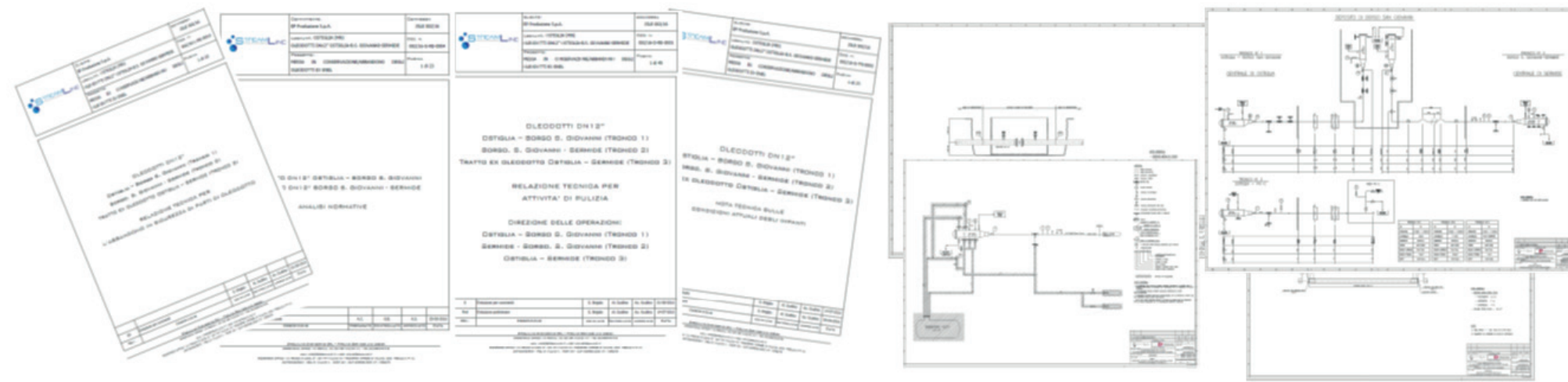


The interpretation of the environmental law could led to an other choice that has been developed in our project.

# Decommissioning Procedure

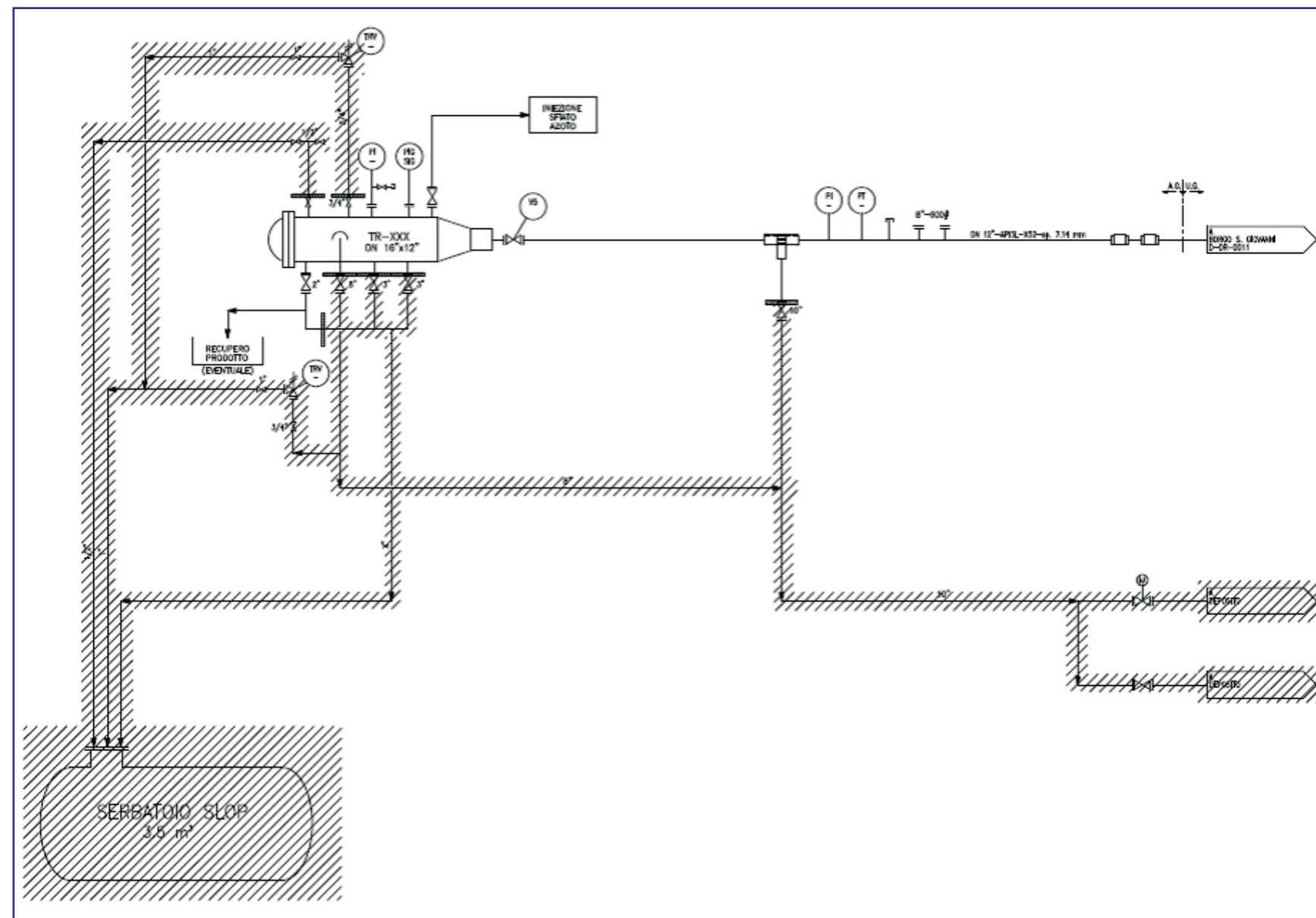
On the basis of the customer request, the following activities have been carried out:

- Cleaning Procedure for the pipelines to be abandoned or removed;
- Cleaning Procedure for the pipeline to be kept temporary out of service for future opportunities;
- Abandonment Procedure with P&Id or scheme;
- Removal Procedure with P&Id or scheme.



## Decommissioning P&Id

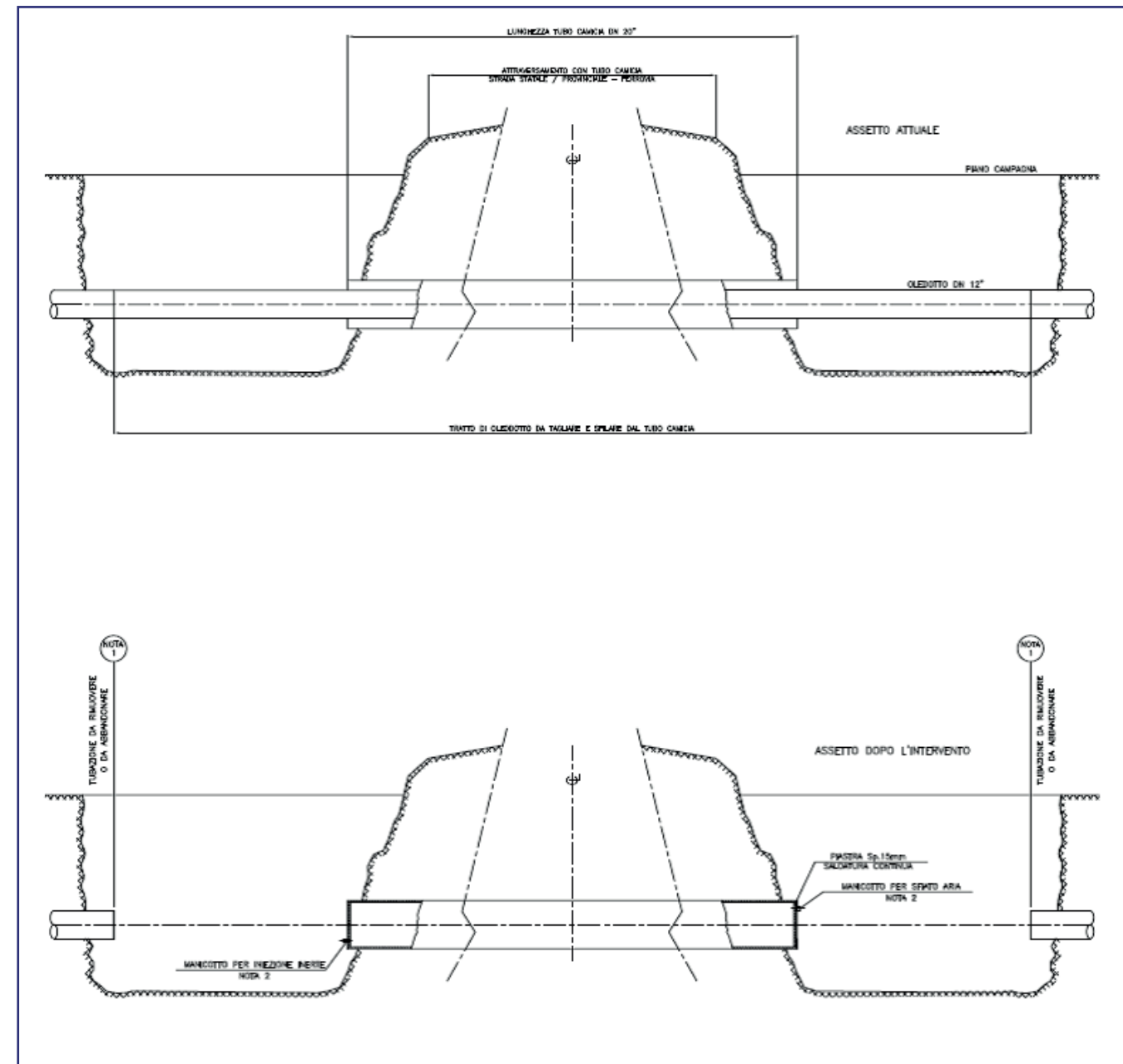
Example of Decommissioning P&Id. The pipeline shall be disconnected from all potential sources and the ends sealed.





# Decommissioning P&Id

Example of Decommissioning of a railway crossing.



# Cleaning Procedure



**For each pipeline, the following activities have been detailed:**

- Pressurisation test;
- Guidelines for potential repairs;
- Displacement and Inerting;
- Pigging;
- Chemical cleaning;
- Inerting.

**For each activities, the following parameters have been reported:**

- Nitrogen Pressure;
- Nitrogen Flowrate and Volume;
- Pig Type to be used (Foam, Caliper, Gauging, Cleaning, Bi-Di);
- Cleaning, Pressurisation, Pigging Criteria;
- Solvent Batches;
- Water Batches;
- Cost Estimation.