

# GEMACO Project Management for Maintenance, Revamp and Turnaround Projects

Gemaco  
Jean-Marc Sluyters  
info@gemac.com

## **Content:**

1. Introduction
2. Gemaco stocks
3. Gemaco Project Management
4. Some project examples
5. References
6. Conclusions

## 1. Introduction

Urea and Nitric Acid plants are prone to various corrosion phenomena, sometimes combined with high temperature and high pressure; they require specific austenitic stainless steels meeting the right quality specifications.

Applying inferior materials seems attractive as it might be more easily available but this can lead to unacceptable safety risks and/or unplanned shut downs. The costs involved when these plants are out of operation are very high due to the large plant capacity sizes not even considering the impact on downstream production plants such as i.a. ammonium nitrate and melamine plants.

Gemaco has numerous proven records to supply the required materials with the right quality certificates within a short time. This is possible due to the large stock with qualified materials present at Gemaco's facilities and Gemaco's strong sourcing network and experience.

Gemaco also offers Technical & Logistic Support as well as Contractor Services for Maintenance, Revamp or Turnaround Projects. This can provide significant Added Value for nitric acid and urea producers, receiving the right material at the right place at the right time.

Gemaco will be your partner.

## 2. Gemaco stocks

Gemaco has a large stock of Special Stainless Steels for Urea & Nitric applications available.

- UREA
  - ✓ Combination corrosion + temperature + pressure
  - ✓ Special grades:
    - ✓ 316L UG – WNR. 1.4435/1.4406/1.4429
    - ✓ 25.22.2 – UNS S31050 – 310Mo LN – WNR. 1.4466
  - ✓ Specifications from licensors or end-users
- NITRIC
  - ✓ Concentration and temperature
  - ✓ Special grades:
    - ✓ WNR. 1.4361 – Uranus S1® - UNS S30600
    - ✓ WNR. 1.4335 – Uranus 65® - 310L – UNS S 31002
  - ✓ Specifications from engineering companies or end-users

More than 2 Mio € of material from stock is available in many shapes and conditions:

- Raw material: slabs and billets
- Bars
- Pipes: from 1/8" up to 14" – thickness up to 35 mm
- Tubes: for heat exchangers, strippers or condensers
- Fittings: elbows, reducers, tees, flanges & gaskets
- Plates & sheets

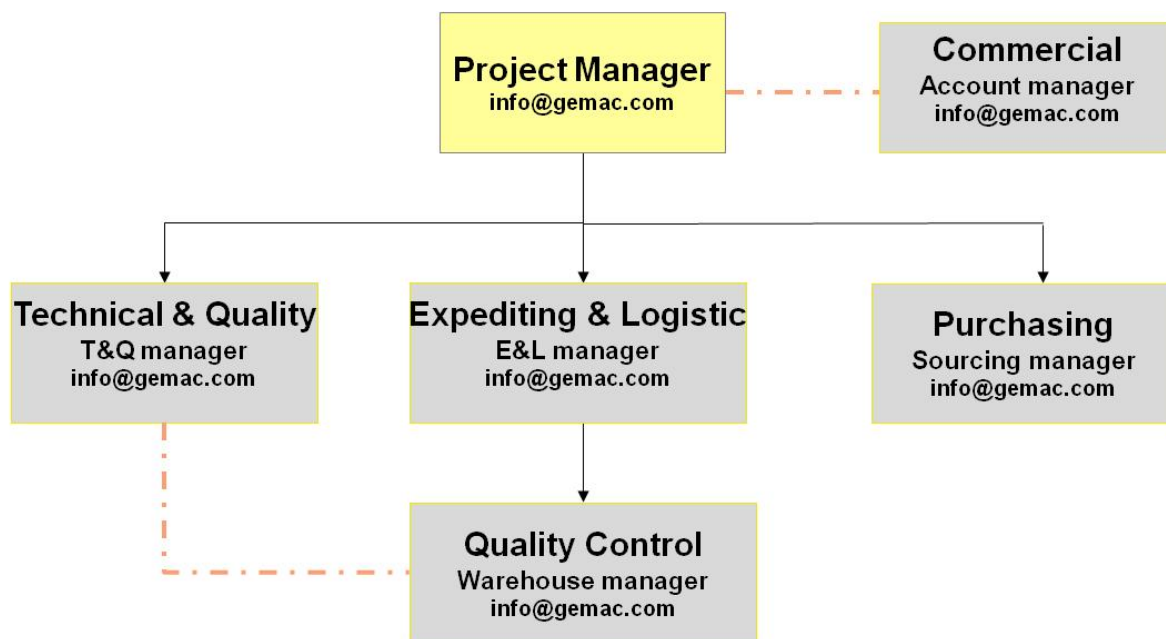
### 3. Gemaco Project Management

Gemaco has a complete project management organization able to handle Maintenance, Revamp and Turnaround Projects in an efficient and professional way.

Gemaco can supply a complete range of products giving you the advantage of a single source and a Single Point of Responsibility for the total scope of supply.

Furthermore you will gain the benefits of a short delivery time as a result of Gemaco's large stock flexibility and strong sourcing network and experience.

For each project, Gemaco appoints a dedicated project organization.



**Figure 1: Typical Project organization at Gemaco**

The Sourcing Manager plays a vital role in each project team and is aiming to assure the supply of the required material with the right specification within the agreed delivery times.

The Sourcing Manager responsibilities are:

- ✓ Better knowledge of suppliers capabilities
- ✓ Qualification of new suppliers
- ✓ Regular visits to suppliers (KOM's, Pre-inspection meetings, expediting, inspections, audits, ...)
- ✓ Acting pro-actively
- ✓ Coordination of inspections with different parties involved (Gemaco, customers, suppliers, Third Part Inspection)
- ✓ Increasing of strategic products on stock at Gemaco
- ✓ Improved management of Gemaco's Stock

Quality Control is an important point in Gemaco's success story; in each project the right quality is assured by:

- ✓ Quality inspections
- ✓ Visits at suppliers
- ✓ Checking and digitally archiving all quality certificates
- ✓ Performing internal checks such as PMI, US wall thickness testing, Ferrite content, ...



Picture 1 a/b/c: Quality control plays a vital role

Gemaco is very well established to furnish all kind of technical and logistic services and support you may need. For example several of our clients ask us to receive first all project materials and perform centrally the quality inspections together or on behalf of the client.

Project scheduling is obviously part of professional project management and Gemaco has the state of the art tools and abundant experience to assure you a reliable delivery of all materials in the agreed time.

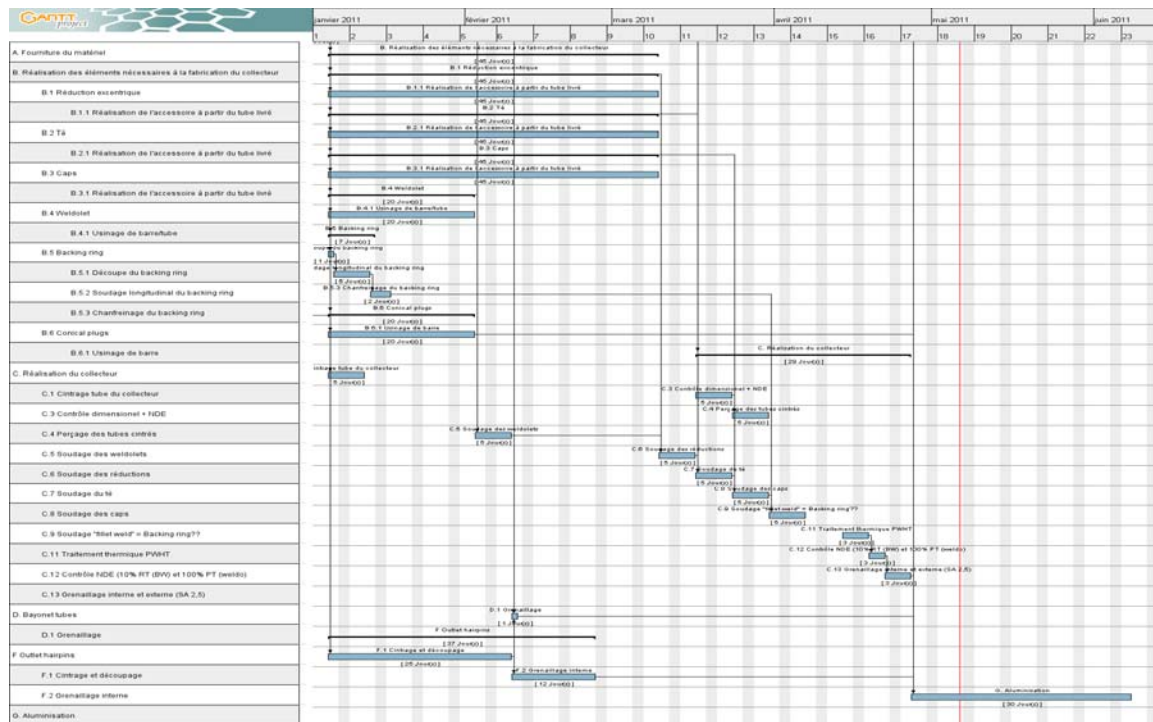


Figure 2: Typical Project schedule

GEMACO is certified according to ISO 9001 (since 1999) and OHSAS 18001 (since 2009) standards.  
A renewal audit for both certifications (combined) is scheduled for December 2011.

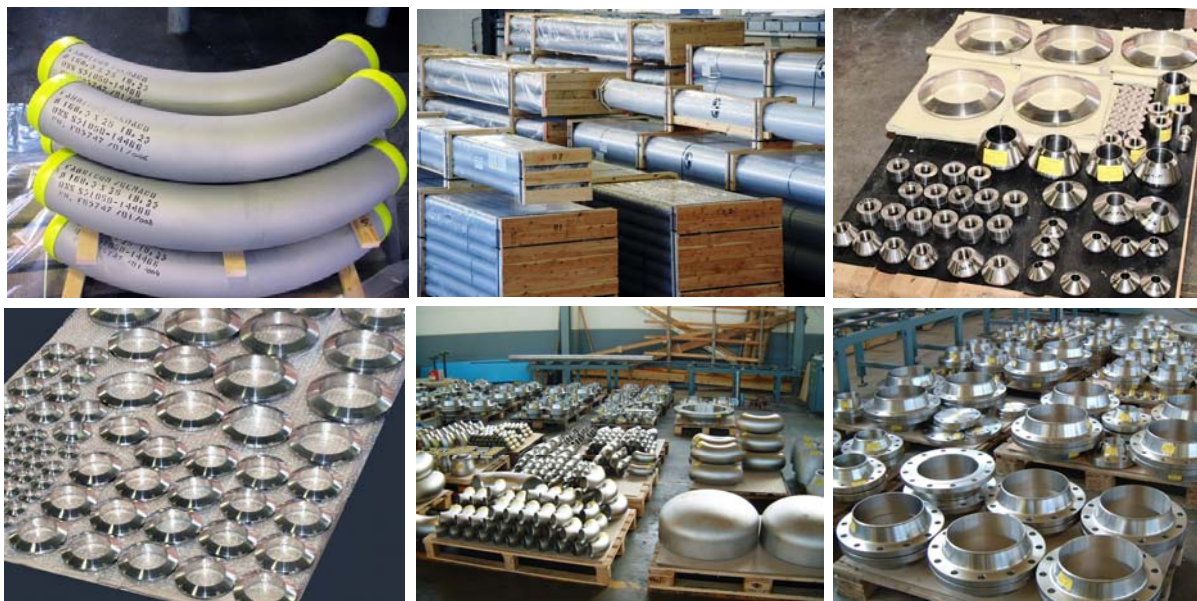


Figure 3 a/b: Quality certificates

#### 4. Some project examples

Gemaco has numerous successful references executing Maintenance, Revamp and Turnaround Projects.

As client this means you put all the work in one hand and obtain a single point responsibility for the procurement and fabrication including controls and expediting of specific equipment or spools.



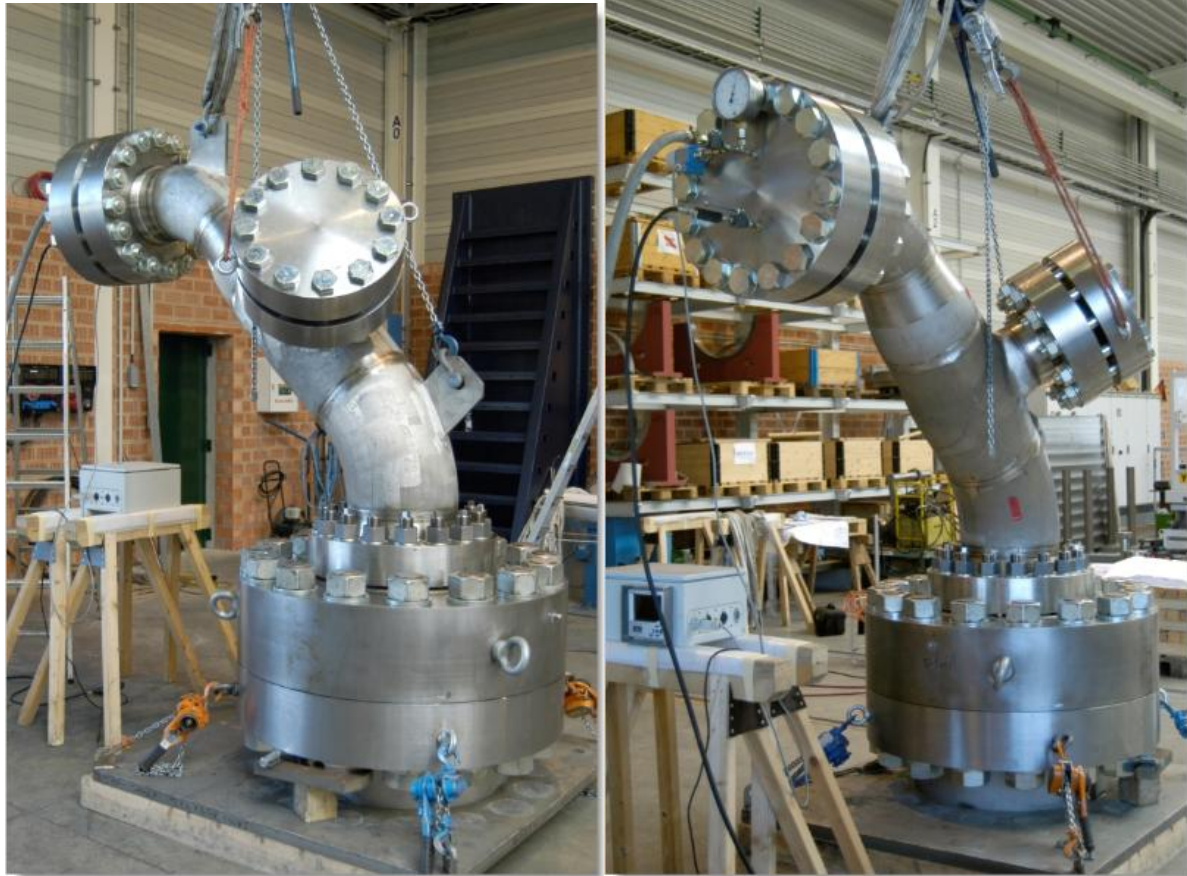
Pictures 2 a/b/c/d/e/f: Some project examples

Gemaco will coordinate the complete project activities with own stock, sub suppliers and act as the spider between you as the client/enduser, the engineering contractor, the subcontractor, the (sub) suppliers, etc.

Gemaco will be the Solution Provider for your Maintenance, Revamp and Turnaround projects. Gemaco has been responsible for several critical, technology based, equipment items, like for example the top part of a High Pressure CO<sub>2</sub> Stripper for an urea plant.

*Example: Top cover of a High Pressure CO<sub>2</sub> Stripper for a urea plant*

Gemaco has been in charge of the procurement, fabrication, quality control and FOB supply of a complete top cover of a High Pressure CO<sub>2</sub> Stripper, which was part of a revamp project



**Picture 3 a/b: Pressure Test of a complete top cover of a High Pressure CO<sub>2</sub> stripper**

The top section did consist of a new man-hole cover with a new 16" gas outline line, which included a 10" Tie-in connection.

The construction material of High Pressure Piping parts was 316L Urea Grade (wall thickness 40 mm), while the liner of the man-hole cover was 25-22-2, the design pressure was 159 bar.

The various parts were procured either from own stock or from qualified and experienced producers in agreement with the client and licensor requirements. All the parts were assembled together by qualified welders and operators using high technology tools.

## 5. References

Gemaco has broad experience to manage projects for clients worldwide, as well as for the supply of spare parts or tailor made products.

Gemaco can provide further technical and logistic services and contractor services.

A list of references can be sent to you upon request to [info@gemac.com](mailto:info@gemac.com)

## 6. Conclusions

Urea and Nitric Acid plants require special attention:

- ✓ Special grades
- ✓ Specifications from licensors, engineering companies or end-user
- ✓ Expertise
- ✓ Severe controls
- ✓ Flexibility, reactivity, reliability

Gemaco offers you **PRICE**<sup>®</sup>:

- ✓ **P**rofessional
- ✓ **R**eliable
- ✓ **I**ntelligent
- ✓ **C**ustomized
- ✓ **E**xecution

GEMACO will be your partner and very pleased to help you.

For further information or enquiry, please contact our team [info@gemac.com](mailto:info@gemac.com)