

## ENGINEERING AND/OR PROJECT MANAGEMENT

### HYDRANT REFUELLING SYSTEM, BRUSSELS AIRPORT, BELGIUM

1995	Installation of a fiber optic communication network for process control purposes between main computer & remote I/O stations
1997	Installation of electronic driven motor starters on 8 hydrant pumps
2000-2001	Installation of a 250 kW frequency controlled pump-motor unit
2003-2007	Renewal of the automation system, process control and emergency shut-down systems
2008	Feasibility study and design concept for the extension of the hydrant system to the cargo area
2008-2009	Automation of the foam injection of the firefighting system
2009-2010	Modification of the hydrant system due to construction underground train tunnel through the airport
2011-2012	Detailed design of several safety upgrades
2012	Modification hydrant system Concourse B
2012	Feasibility study relocation valve chamber
2012	Review feasibility study for extension of hydrant to cargo area
2012-2013	Extension hydrant system Concourse A
2014-2015	Refurbishing of imploded storage tank of 5.000 m <sup>3</sup>
2016	Replacement fire engines and obsolete parts electrical system
2017	Installation of flame arresters and vacuum detection on storage tanks
2017	Hydrant modification for A380
2019-2022	Design, construction follow-up and commissioning of hydrant modification works - phasing defined by airport planning

### LIEGE AIRPORT, BELGIUM

1995-1997	Design and construction of a new fuel facility
2002-2007	Design and construction of extra tanks (3 x 1.760 m <sup>3</sup> tanks)
2004-2011	Design & construction of a fuel hydrant system (different phases)
2011-2014	Study for upgrade of flow rate capacity of the supply pipeline
2014	Design for additional storage capacity
2014	Hydraulic study and concept layout new jet fuel train unloading connected to existing supply pipeline of airport
2015	Re-routing supply pipeline airport due to construction train station
2016	Final study for refurbishment existing airport supply pipeline
2017	Refurbishing supply pipeline – design, incl. works for elimination of weak spots (e.g. via HDD)
2017-2020	Design and construction follow-up of fuel hydrant extension(s)

## ENGINEERING AND/OR PROJECT MANAGEMENT

### LIEGE AIRPORT, BELGIUM

2019	Feasibility Study – Strengthening the fuel supply chain and on-airport fuel storage capacity based on airport master planning
2020-2021	Assistance during tendering, construction supervision and commissioning for additional storage capacity in the present tank farm
2020-Present	Contractor selection and follow-up works for refurbishment existing airport supply pipeline
2020-Present	Study to define optimal routing on-airport fuel supply pipeline due to relocation depressurization station (imposed by runway upgrade works), incl. assistance with modified permitting for pipeline with authorities

### FINDEL AIRPORT, LUXEMBOURG

1997	Installation of an automated tank gauging & SCADA system
1998	Installation of a refueller test stand
1999-2000	Review and renewal of the electrical & automation system
2001	Preliminary design concept - new fuel facility
2002	Construction of a self-service installation for AVGAS
2004-2008	Retrofit of the existing fuel facility based on investment plan (risk analysis)
2008-2016	Retrofit of the existing fuel facility based on operational risk & safety assessment
2011-2012	Basic design concept - new fuel facility
2014-2018	Retrofit of the existing fuel facility based on new environmental legislation
2018-2019(stage 1) 2020-2021(stage 2)	Stage 1: Design installation to allow for truck supply, incl. support for obtention permits with authorities Stage 2: Construction and commissioning installation to allow for truck supply

### OLYMPIC FUEL COMPANY, ATHENS AIRPORT, GREECE

1996	Design concept review - hydrant system lay-out and pipe sizing
1998	Design concept - fuel facility lay-out
1998-1999	Design concept - automation system

### QUITO INTERNATIONAL AIRPORT, QUITO, ECUADOR

2008	Feasibility study - design concept - hydrant system and fuel facility
------	---

### NAPELS AIRPORT, NAPELS, ITALY

2005	Design concept review - fuel facility
------	---------------------------------------

### LEIPZIG AIRPORT, LEIPZIG, GERMANY

2006-2007	Design concept - fuel facility
-----------	--------------------------------

<b>ENGINEERING AND/OR PROJECT MANAGEMENT</b>	
<b>QUITO INTERNATIONAL AIRPORT, QUITO, ECUADOR</b>	
2008	Feasibility study - design concept - hydrant system and fuel facility
<b>NAPELS AIRPORT, NAPELS, ITALY</b>	
2005	Design concept review - fuel facility
<b>LEIPZIG AIRPORT, LEIPZIG, GERMANY</b>	
2006-2007	Design concept - fuel facility
<b>BANGALORE INTERNATIONAL AIRPORT, BANGALORE, INDIA</b>	
2005-2006	Design concept and construction supervision - fuel storage and hydrant feeder lines
2005-2006	Design concept review - hydrant system
2007	Design concept - hydrant extension
2011-2012	Design concept review and construction supervision - west side I and II extension hydrant
2012	Design concept review - east side I extension hydrant
2017-2019	Design and construction follow-up - west side III extension hydrant
2017	Design concept east side II extension hydrant
2017	Design concept T2 terminal hydrant extension
2018-2020	Design, construction supervision, commissioning and start-up support for hydrant extension in 3 phases (T2, phase 1A - 1C)
<b>LARNACA AIRPORT, LARNACA, CYPRUS</b>	
2006-2007	Feasibility study - Design concept - FEED Design hydrant system
<b>TIRANA AIRPORT, TIRANA, ALBANIA</b>	
2007	Design concept - Fuel facility
<b>TAN SON NHAT INTERNATIONAL AIRPORT, HCMC, VIETNAM</b>	
2009-2011	Feasibility study - Design concept - FEED Design - Fuel facility
2014	Refurbishing and integration of existing hydrant system
2015	Elaboration of maintenance records for new fuel facility and integrated hydrant system + training of staff
<b>KING SHAKA INTERNATIONAL AIRPORT, DURBAN, SOUTH AFRICA</b>	
2010-2012	Review condition of new fuel facility and hydrant system
2012-2014	Remediation works fuel facility and hydrant system
<b>MAKASSAR INTERNATIONAL AIRPORT, MAKASSAR, INDONESIA</b>	
2010-2012	Design review, automation philosophy, commissioning assistance - fuel facility
2012	Scheme Design (and sizing) - new hydrant system

<b>ENGINEERING AND/OR PROJECT MANAGEMENT</b>	
<b>WARSAW AIRPORT, WARSAW, POLAND</b>	
2012	Design concept – fuel facility & upgrade hydrant (condition assessment)
<b>NICE CÔTE D’AZUR AIRPORT, NICE, FRANCE</b>	
2012-2015	Design new tank farm and ITP operation center at Nice Côte d’Azur Airport (3 x 1.800 m <sup>3</sup> tanks)
<b>LYON SAINT-EXUPÉRY AIRPORT, LYON, FRANCE</b>	
2013	Design concept new fuel facility (3 x 4.000 m <sup>3</sup> tanks)
2014	Design concept new fuel facility (3 x 2.500 m <sup>3</sup> tanks)
<b>HONG KONG INTERNATIONAL AIRPORT, HONG KONG</b>	
2013	Concept design new into-plane base
<b>JULIUS NYERERE INTERNATIONAL AIRPORT, DAR-ES-SALAAM, AFRICA</b>	
2014	Concept design new fuel facility, hydrant and into-plane base (3 x 1.970 m <sup>3</sup> tanks)
<b>CHINCHERO CUSCO INTERNATIONAL AIRPORT, CUSCO, PERU</b>	
2014	Concept design new fuel facility and hydrant (3 x 2.400 m <sup>3</sup> tanks)
<b>BERGAMO AIRPORT, BERGAMO, ITALY</b>	
2014	Design concept specifications modular fuel facility (3 x 80m <sup>3</sup> tanks)
<b>LILLE AIRPORT, LESQUIN, FRANCE</b>	
2014	Assessment condition existing fuel facility – Concept design unloading infrastructure
<b>BALE-MULHOUSE AIRPORT, SAINT-LOUIS, FRANCE</b>	
2015	Assessment condition existing fuel facility – Concept design extension storage capacity and new firefighting system
<b>DUBLIN AIRPORT, DUBLIN, IRELAND</b>	
2015	Concept design new fuel facility – Hydrant integration and extension - Remote into-plane base fed via feeder lines of hydrant
<b>DARWIN INTERNATIONAL AIRPORT, DARWIN, AUSTRALIA</b>	
2015	Concept design new fuel facility – Hydrant integration (3 x 670 m <sup>3</sup> tanks)
<b>MALÉ INTERNATIONAL AIRPORT, MALDIVES</b>	
2016	Concept design review new jetty, fuel facility and hydrant system
<b>O.R. TAMBO INTERNATIONAL AIRPORT, JOHANNESBURG, SOUTH-AFRICA</b>	
2016	Detailed design review upgrade fuel facility
<b>MALTA AIRPORT, MALTA</b>	
2016	Concept design new into-plane base

## ENGINEERING AND/OR PROJECT MANAGEMENT

### EZEIZA INT'L AIRPORT, ARGENTINA

2016 FEED new tank farm – Operation center - Hydrant integration and expansion (5 x 5000 m<sup>3</sup> tanks)

2018 Sizing and design hydrant extension

### AEROPARQUE J.N. AIRPORT, ARGENTINA

2018-2019 Feasibility study – Methodology and required development of fuel supply chain, on-airport fuel storage and distribution based on airport master planning

### VENICE AIRPORT, ITALY

2017 Concept design new fuel facility with modular expansion capabilities (5 x 1800 m<sup>3</sup> tanks)

### DUSSELDORF AIRPORT, GERMANY

2018 Feasibility study – Define fuel demand and development of fuel supply methodology, fuel storage capacity and on-airport distribution based on airport master planning

### NEW ULAANBAATAR INT'L AIRPORT, MONGOLIA

2017 Assessment design of hydrant under construction and recommendations for cost effective solutions to align hydrant with international aviation codes and standards

### PALERMO AIRPORT, SICILY

2018 Refurbishment works existing storage tank, scope and advisory support during refurbishment works

### PALERMO AIRPORT, SICILY

2019 Asset condition assessment existing storage tank, scoping of assessment and support with interpretation of assessment results

### SYDNEY INT'L AIRPORT, AUSTRALIA

2020 O&M Support – Budgeting operating costs, fixing staffing requirements, contractual negotiation support, set-up of complete maintenance management system and records (JIG2 compliant), set-up of HSSE management system and records (JIG compliant), set-up of operation and training manuals, managing essential information transmissions with previous operator, insurance of timely obtention of licenses and third party contractor agreements, liaison contact for airport as owner of the facilities,...