

# Integrity issues on strategic IKL pipeline

role of IKL in energy safety of Czech Republic,  
inspection methods in relation to permit  
extension

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Dr. Libor LUKÁŠEK, Ph.D.  
Member of the Board of Directors of MERO ČR, a.s.  
Director for Strategic Development and Company Administration  
Executive of MERO Germany AG

Ondřej Šmolík  
Operations manager

# European Pipeline System

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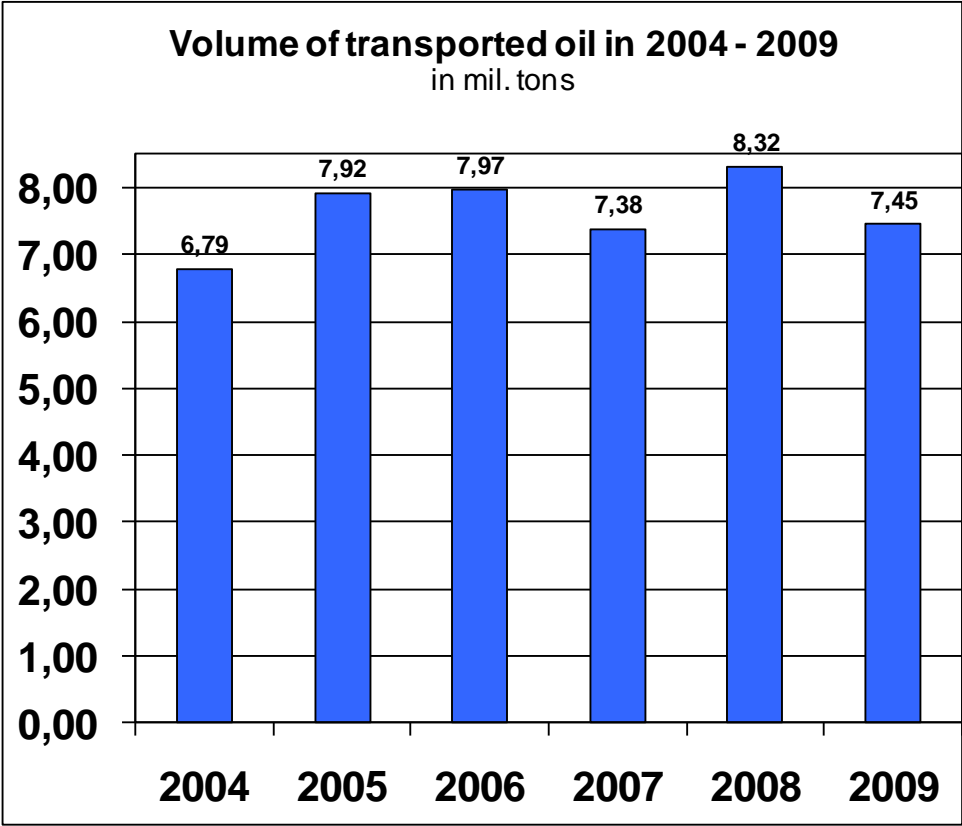


# ROLE OF MERO ČR, a. s.

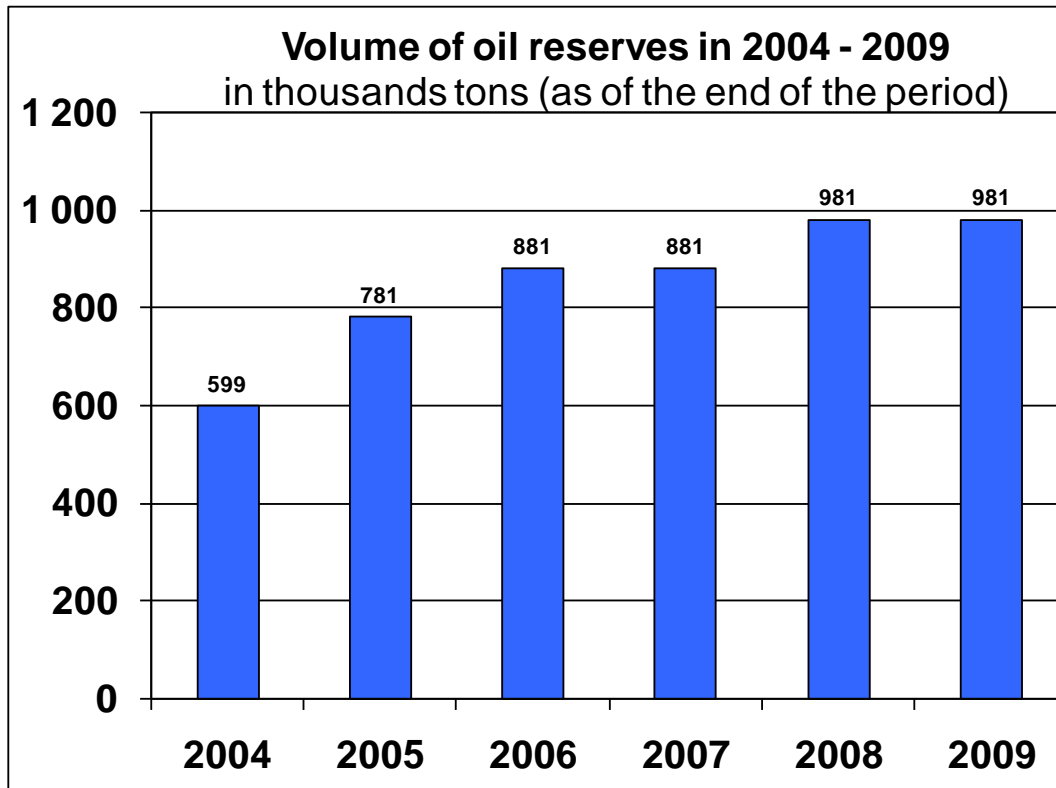


- § **ENTITY OF STRATEGIC IMPORTANCE IN SUPPLIES OF CRUDE OIL TO THE CZECH REPUBLIC AND PROTECTING STRATEGIC EMERGENCY CRUDE OIL RESERVES**
  
- § **COMPANY FULFILLING KEY TASKS OF THE GOVERNMENT IN INCREASING ENERGETIC SAFETY OF THE CZECH REPUBLIC, OR DIVERSIFICATION OF CRUDE OIL TRANSPORT ROUTES TO THE CZECH REPUBLIC**
  
- § **IT PLAYS AN IMPORTANT ROLE IN REALIZATION OF THE ENERGETIC CONCEPT OF THE CZECH REPUBLIC AND THE EU ENERGETIC POLICY**

# SELECTED ECONOMIC INDEXES OF THE COMPANY IN 2004 - 2009



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# Tank Farm Nelahozeves



# Central Tank Farm Crude Oil Capacity in 2010

- **Total 1 550 000 m<sup>3</sup>**

- **Capacity for 98 days (EU meth.)**

- Including stored products

- **Capacity for 115 days (IEA meth.)**

- Including stored products

4 x tank 50 000 m<sup>3</sup>

Tank diameter 60,3 m

Tank height 18,8 m

6 x tank 100 000 m<sup>3</sup>

Tank diameter 84,5 m

Tank height 19,2 m

6 x tank 125 000 m<sup>3</sup>

Tank diameter 84,5 m

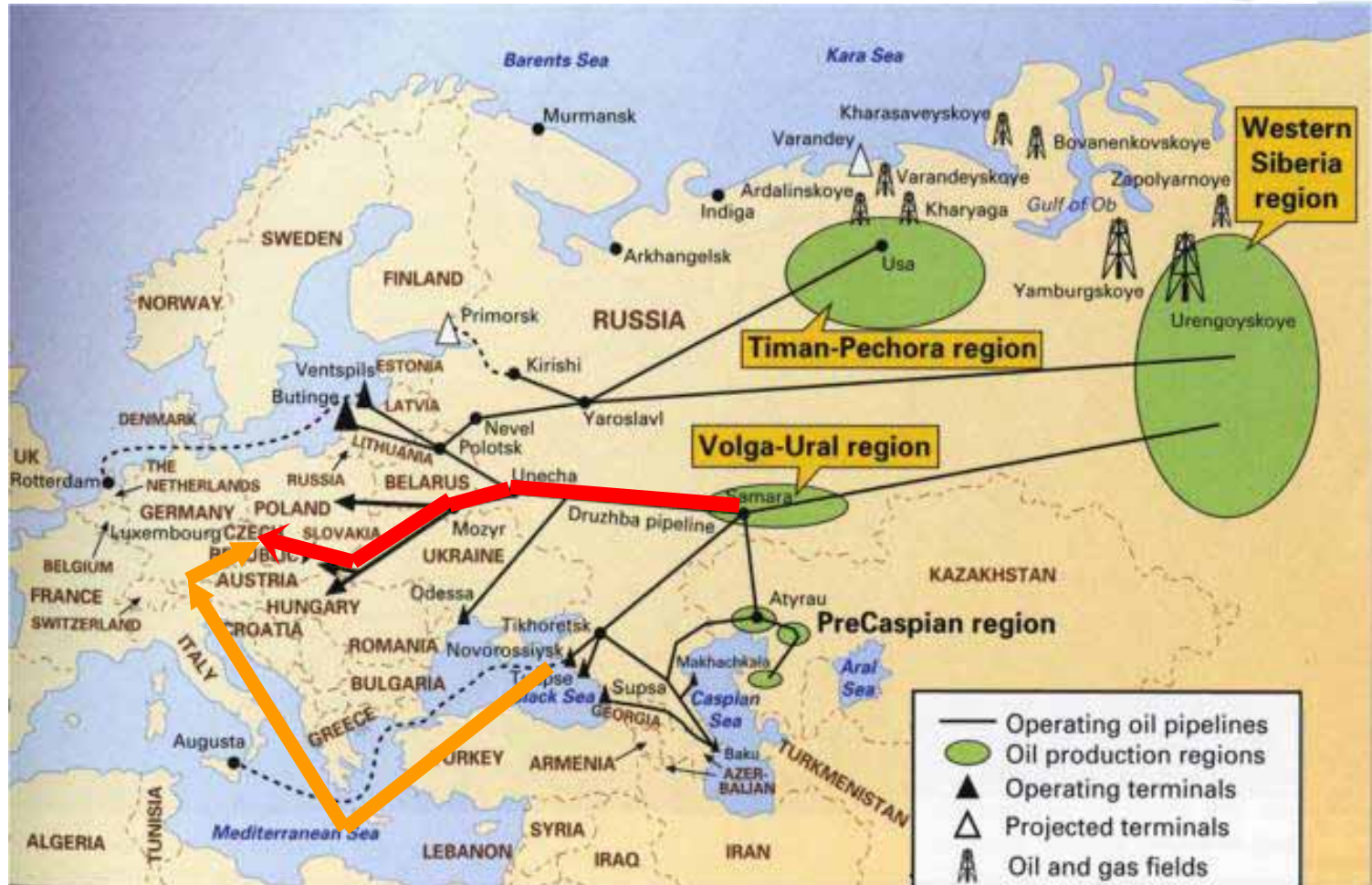
Tank height 24,1 m

# Central control room

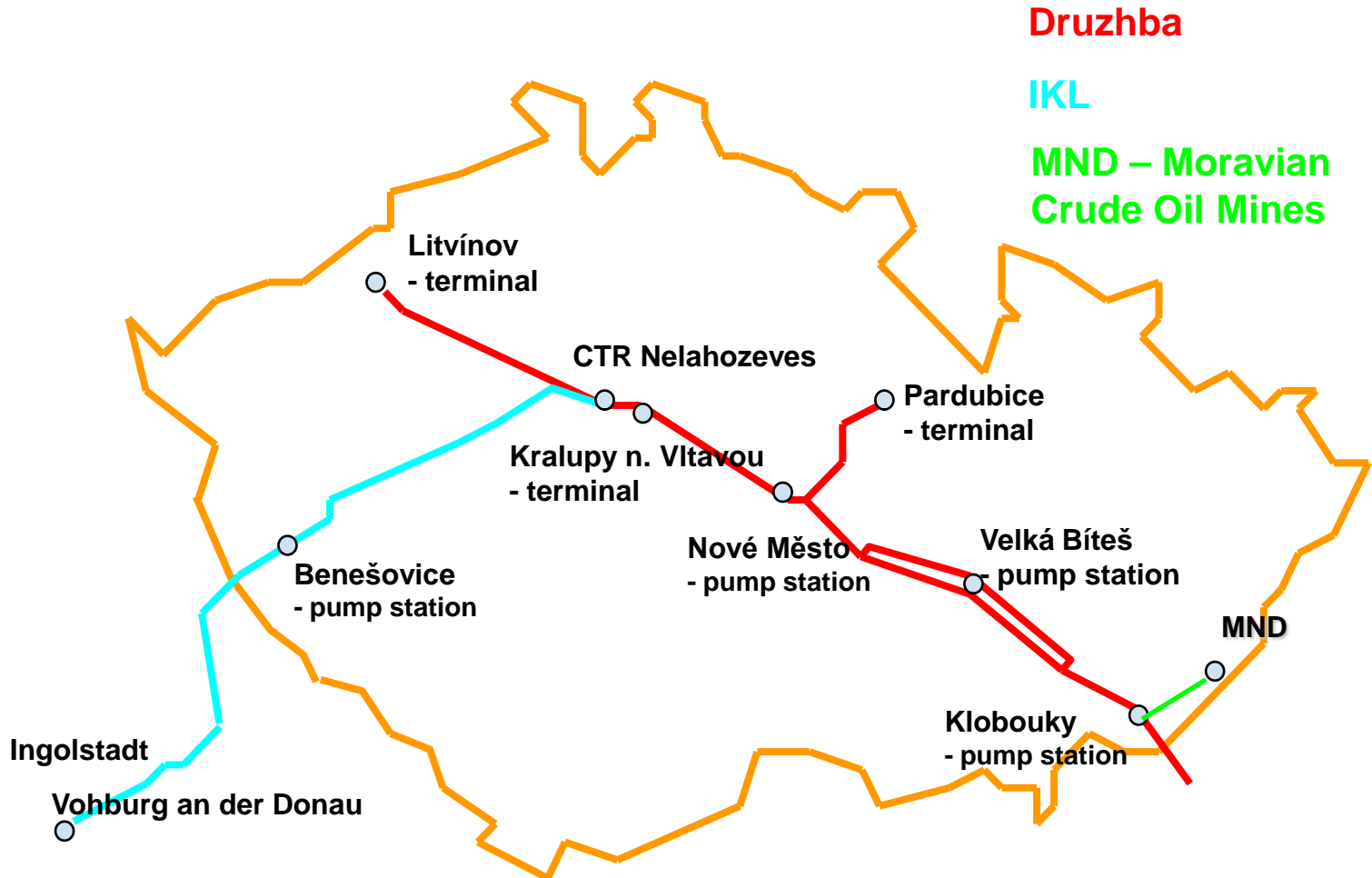




# Crude Oil's Trade Channels to the Czech Republic



# PIPELINE SYSTEM IN THE CZECH REPUBLIC



# Pipeline IKL

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In Operation

Length:

Diameter:

Intermediate pumpstation:

Max. flow:

Max. pressure:

Capacity

since end of 1995

347 km

700 mm

1 - Benesovice

1500 m<sup>3</sup>/h

65 bar

cca 11 mil. tons/year



# Strategical IKL Pipeline -

## Facts of 2nd Half 2008

- **Volume from Druzhba dropped till 47%**
- **SWAP contract was used ( max. limit 400 000 tons – approx. 15 – 20 days for refineries )**
- **President of State Strategic Reserves of Czech Republic obtained approval from Government to relieve crude oil under 90 days without limit**
- **MERO promptly provided crude oil from state reserves to refineries ( without impact on processed volume )**
- **Supplies of REB were redirected to TAL and IKL**
- **Until December 2008 state reserves reached original capacity**

# Operation of IKL pipeline

## High safety standards

- new SCADA system since 2008
- exact leak detection system
- leak detection pig each month
- regular cleaning and internal inspection
- modern Cathodic protection
- regular helicopter surveillance
- diversified control rooms
- estimation of lifetime based on real loading and stressing

# Surveillance right of way



## Extension of Operation permit

- **Permit valid till 31. 12. 2014**
  
- **Main requirements for extension of Permit:**
  - **water stress test or alternative methodes**

### **Agreed using of alternative methodes:**

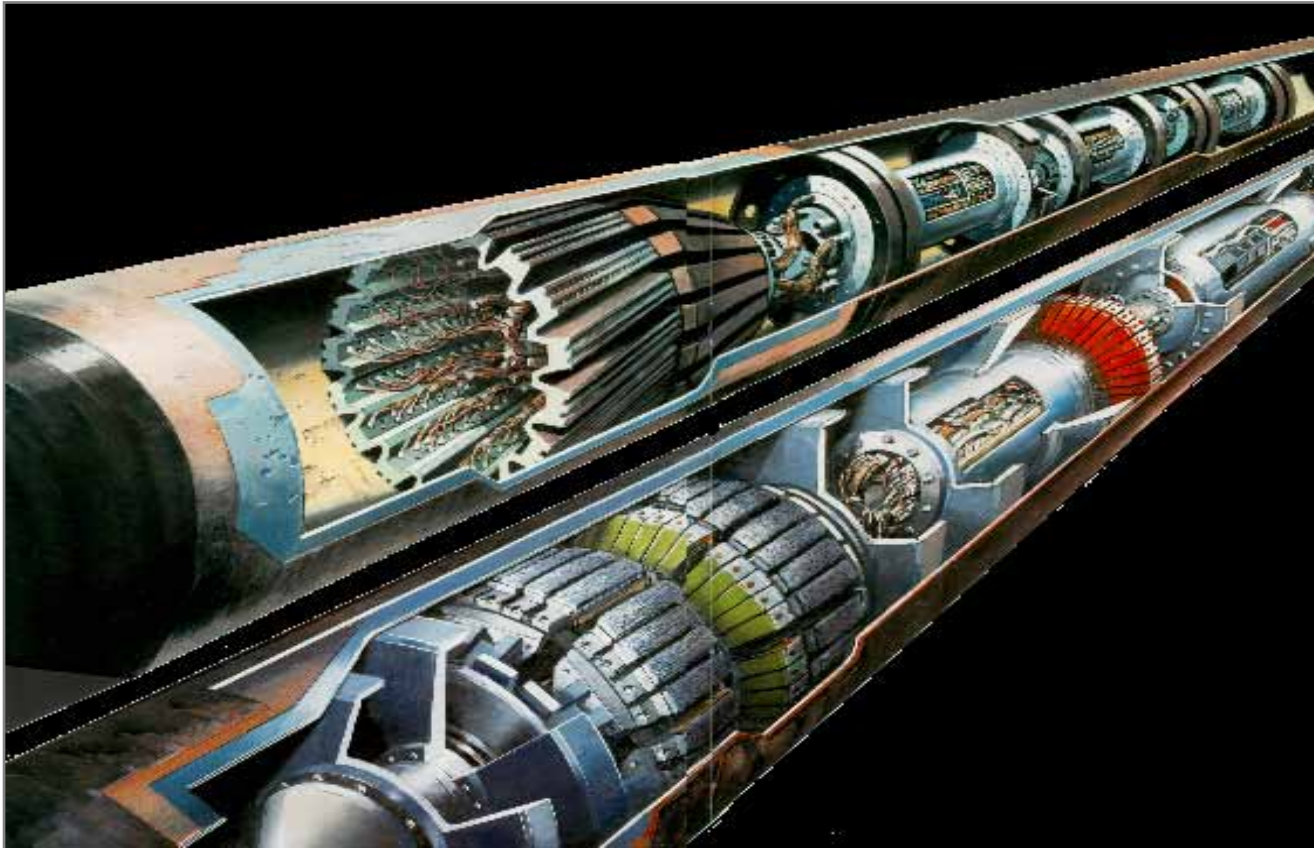
- **internal inspections (measurement of modality, sensitive wall thickness measurement and crack detection)**

## Extension of Operation permit

- **Material analyses**
- **Prove integrity of pipeline:**  
pressure tests, leak detection pig runs, sensitive leak detection system incl. Dynamic mass balance
- **Implemented Document „Pipeline Integrity Management System“** (incl. e.g.: rules for operation, maintenance, training, supervision, safety at work, GIS, CP, route surveillance, emergency procedures, etc.)



# Internal inspections



# Preventive repairs



**MERO ČR, a.s.**  
**Veltruská 748**  
**278 01 Kralupy nad Vltavou**  
**Czech Republic**

**Phone No.: +420 315 701 111**  
**Fax No.: +420 315 720 110**  
**E-mail: [info@mero.cz](mailto:info@mero.cz)**  
**[www.merocr.eu](http://www.merocr.eu)**

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