LOCAL CONTENT

UFRJ ROLE

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SUMMARY

Background

Observatory of Local Content

Technological Park (COPPE)
Vast oil resources identified (pre-salt)

Aggressive investment plans (Petrobras and partners)

Technological challenges

Industrial opportunities (cooperation)
Petrobras Coordination

- Identify Opportunities
- Specify Technological Challenges
- Share Industrial Risks

Partners in Leadership
PETROBRAS R&D INVESTMENTS

Source: Petrobras
RESEARCH AT UNIVERSITIES

Post graduate Dissertations

Fonte: Capes e ANP
INVESTMENTS AND PATENTS (1999-2010)

Sources: ANP (Agência Nacional de Petróleo) and USPTO
SUMMARY

Technological Challenges
Industrial Opportunities

Observatory of Local Content

Technological Park (COPPE)
Domestic Supply Capacity (equipments)

Segments
1. Communications
2. Transformers and electrical substations
3. Motor–generator sets
4. Electrical distribution Panel boards
5. Automation
6. Welded steel pipe/tube
7. Carbon steel (Materials)
8. Gas turbine
9. Winches
10. Valves
11. Fittings and Flanges
12. Boiler shop
13. Subsea equipments
14. Subsea umbilical tubing
15. Pumps
16. Compressors
17. Combustion Motors
18. Cranes (Onshore)
19. Engineering Services
20. Construction and installation services
21. Instrumentation and measurement equipment
22. Gas turbines
23. Boiler shop (steel materials)
24. Pumps (Multiphase)
25. Compressors (centrifugal)
26. Gas Motors (Large/oversize)
27. Siderurgy (special materials)
28. Seamless steel pipe/tube
29. Valves (Subsea)
30. Cranes (Offshore shore)
Observatory of Local Content

- Specify Technological Challenges
- Identify Opportunities
- Share Industrial Risks

UFRJ

Industry

ANP

National Innovation System
ACTIVITIES

– Regular visit and interview (200 suppliers)
– Every other monthly bulletin of the local content
– Quadrimestral reports on local content specific policy issues
– Annual conference on local content
– Training course for ANP personnel on local content policies
SUMMARY

Technological Challenges
Industrial Opportunities

Observatory of Local Content

Technological Park (COPPE)
UFRJ CAMPUS

- COPPE/UFRJ
- CENPES - PETROBRAS Research Center
- Start-ups Incubator
- Rio Technology Park - 11 R&D industrial Centers
- Innovation Tower
Rio Technology Park
200,000 m²

Planned Expansion > 200,000 m²
Incubated Small Companies
COPPE/UFRJ

12 Departments for Graduated Courses (Master and Doctoral Degrees)

- Biomedical Engineering (7)*
- Civil Engineering (7)
- Electrical Engineering (7)
- Mechanical Engineering (7)
- Nuclear Engineering (6)
- Metallurgical and Material Engineering (6)
- Ocean Engineering (6)
- Energy Planning (6)
- Production Engineering (6)
- Chemical Engineering (7)
- Systems and Computation Engineering (7)
- Transportation Engineering (5)

* Grade given by CAPES/Ministry of Education (7 is the maximum)
COPPE/UFRJ

336 Master Dissertations
168 Doctor Theses
1800 Papers in Journals and Conferences
Cooperation with Petrobras

- 1977 - Offshore Structures
- 1984 - Robotics & Control Group
- 1989 - Subsea Technology Lab
- 1998 - Environment & Geochemistry
- 2003 - Ocean Lab
- 2009 - Lab for Nondestructive Tests, Corrosion and Welding
- 2011 - 3000 contracts with PETROBRAS
CENPES Expansion  (Inaugurated in 2010)
SIEMENS

Energy, Industry and Health, Cities and Infrastructure

R&D Center:
- Subsea and Offshore Technologies for Oil & Gas
- Renewable Energy
- Smart Grid
- Software Development
Ocean Lab  (Inaugurated in 2003)

Offshore structures and ship simulation under wave loads, Deep-water installations, Prototypes testing.
Lab Cog  (Inaugurated in 2010)

High performance computing, Scientific visualization, Virtual reality
Applications & development in robotics and control
Seismic acquisition and processing, formation evaluation, well testing and directional drilling, well cementing and stimulation, artificial lift, well completions and consulting.
FMC  (Inaugurated 2011)

Subsea systems: manifold, Christmas tree, pumping, compressors, separation etc.
Usiminas (in construction)

Corrosion, welding, hydrogen failures, residual stresses, fracture, plates for ships and offshore structures.
Baker Hughes

Drillings fluids; Openhole wireless systems; Geoscience and carbonates; Subsea completions.
Pipes & Connections for subsea pipelines and well applications: structural integrity and qualification tests.
Reservoir optimization; CO2 capture; Drill fluids
GE Global Research Center

Aviation, Oil&Gas, Energy, Healthcare, Water.
Thanks for Your Attention