

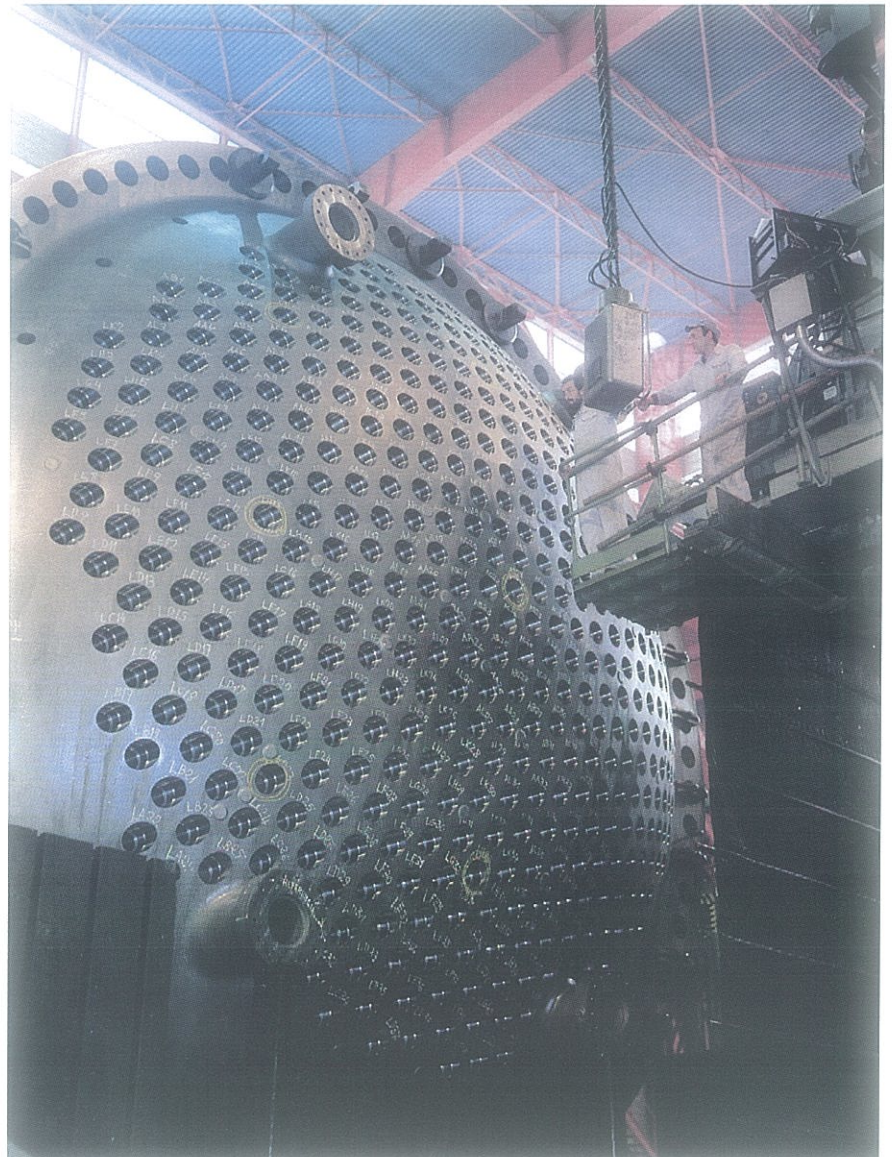
DTN OPERATIONAL SUPPORT TO EASTER EUROPE NPPs

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The Agrupación Eléctrica para el Desarrollo Tecnológico Nuclear, A.I.E. (DTN), (Electrical Society for Nuclear Technology Development A.I.E.) was created on September 26, 1994, with the general purpose of carrying out and operating R&D Projects related to Nuclear Electricity Generation both in Spain and abroad and developed for national and supranational organizations as well as providing project-related services, therefore its main objectives are to establish a common strategy for the Spanish Nuclear Electricity Sector in different areas of activities, and in particular in all those related with Technological Support or collaboration with third countries.

DTN membership includes all Spanish Electricity Utilities with involvement in the nuclear field, which represent 99% of all the Spanish electricity generators. DTNs partners are: IBERDROLA, ENDESA, FUERZAS ELECTRICAS DE CATALUÑA, S.A., UNION FENOSA, S.A., COMPAÑIA SEVILLANA DE ELECTRICIDAD, S.A. and HIDROELECTRICA DEL CANTABRICO, S.A. being one of the largest European Electricity Generation Groups which generates from nuclear origin 33% of all electricity production in Spain.

DTN combines know-how, expertise and capabilities derived from its own experience as an Operator/Owner group of companies and offers them with a complete independence of industrial and Services Suppliers. To represent and channel this operational expertise and know-how, DTN has created the Technological Support Division with the purpose of identifying, programming and developing safety related projects.



Atucha reactor vessel head

DTNs Technological Support is based on the principle of collaboration which allows the fullest possible use of synergies between its different partners, coordinating any complementary cooperation and using the right combination of human resources to tailor the team to the specific project requirements.

CAPABILITIES AND EXPERIENCES

DTN capabilities and experiences related to construction, operation and evaluation of NPPs, are the following:

- Solid experience gained in structuring, developing and controlling of documents and procedures during the engineering, construction, commissioning and operation of all NPPs in Spain.
- Vast experience in the management of projects for plant safety improvements, backfitting and dismantling.
- First hand experience in elaborating feasibility studies and in their application to the upgrading projects accomplished in Western NPPs.
- First hand experience in training people for the above mentioned projects providing them with proven management methodologies, capability to develop training programs & materials.
- First hand experience in developing change control and as-built control procedures.
- Through knowledge of the codes and standards applied in different countries, combined with multidisciplinary experience.
- Capability to develop budget control project planning, quality assurance programmes and all the management activities for large projects.
- Experience in developing feasibility studies (technical-economical) for the completion of the following NPPs:
 - Atucha II (Argentina)
 - Laguna Verde I (Méjico)

ACTIVITY ABROAD

Since its creation DTN is providing technological support services, mainly to East European Countries, by participating in nuclear safety upgrading programmes under Tacis/Phare funds.

It is also member of TPEG and it is participating in the IAEA's Eastern Countries Nuclear Safety Programmes.

RELEVANT EXPERIENCE IN EASTERN EUROPE AND FSU COUNTRIES

DTN has acquired an in-depth knowledge of the main activities under development in the East and FSU countries and was allowed to participate in the preparation of terms of reference, master planning activities etc. of the Tacis and Phare programmes. Specifically the

main activities in the East and FSU countries are as follows:

South Ukraine NPP (SUK NPP) On-Site Assistance

The EU signed a Tacis contract with DTN to manage the on-site assistance programme for SUK NPP with the aim to improve the operational safety of the plant by transferring Western practices in operational procedures uses, maintenance and training programmes. It has to be pointed out that the permanent presence at the site of the Team Leader or his assistant is allowing an easy contact with plant's staff, providing information and support on several subjects related to "safety culture" besides the specific projects which are being developed. It has to be mentioned the frequent visits to Spanish Nuclear Power Plants of plant's experts organized for training purposes. Another line of activity is the assistance provided through "Spanish (or Western) Short-Term experts visits" in order to study and analyze specific aspects, elaborating recommendations for the plant, which can result in the identification and launching on new projects. Total budget allocated for the years 92*/93*/94/95 is 16 MECUs, and the activities developed at the site are:

- Identification and definition of technical projects and assistance to tendering.
- Support SUK NPP staff in updating the Quality Assurance Programme.
- Exchanging experiences on management and operational practices in Spanish NPPs.
- Co-ordination with other local and international Programmes, Institutions and Organisations with particular reference to licensing aspects, audits, peer reviews, etc.
- Development and management of specific projects e.g. ISI, electrical equipment diagnosis primary circuit welding, maintenance enhancement programme, Vibration monitoring system, etc.

Khmelnitsky NPP (KhNPP) On-Site Assistance

Discussions are ongoing with the European Commission for the assignment to DTN as leader of a Consortium which is managing the on-site assistance programme for KhNPP with the aim to improve the operational safety of the plant. The total budget allocated to this programme up to now is 2 MECUS. The main group of activities to be developed are similar to those described above for SUK NPP.

Kalinin NPP On-Site Assistance

DTN is co-operating in the development of the on-site assistance activities under the Tacis programme. Several DTN experts in plant operation and maintenance have worked on-site taking care in particular of the

following aspects, organizational problems, quality assurance, operation (normal and emergency) procedures.

Bulgarian nuclear safety Programme implementation Unit (PIU)

Under a Phare contract placed in 1996, DTN has to provide the PIU with both Western and local expertise to assist the Project Director in the implementation of the current and future Phare projects for Bulgaria Kozloduy NPP. DTN is supplying with expertise to assist the PIU in the management of the technical aspects, assuring at the same time the transfer of know-how to the Bulgarian staff, eventually identifying training needs. In particular DTN assists the PIU in drafting the technical specifications and gives a support in preparing tender packages for technical assistance contracts and equipment orders. Moreover DTN is assisting the PIU in refining the strategic plans and work programmes, proposing amendments where necessary and ensuring the full compliance with the rules and procedures of the Phare programme. Finally DTN is providing short term experts, who are requested to some specific activities.

QA and management support for Kozloduy RPV1 testing programme

The European Commission, through the Phare programme is financing a project to assess the degree of embrittlement of the Kozloduy Reactor Pressure Vessel nº 1.

DTN got a contract to supervise the sampling activities from the QA point of view and as such had to develop the following tasks:

- To follow up the whole project implementation by the interested companies giving support to the Bulgarian project responsibilities.
- To report the progress of the work to the European Commission, identifying possible deviations and proposing corrective actions.



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* DTN took over the assistance activities from UNESA