
ENKA
Istanbul

Centre de Recherche et Développement ENKA, depuis sa fondation le 3 juin 1982, s'est établi au 3, Sevki Bey Sokagi Besiktas-Istanbul, Turquie. C'est une institution privée, sans but lucratif, qui fait partie de la société anonyme du bâtiment et des travaux publics ENKA Construction et Industrie. Le groupe, formé de 15 personnes dont 8 ingénieurs, est animé par Monsieur le Professeur Adnan Sokollu.

Dès sa formation le groupe s'est vu assigner les tâches suivantes :

- **Établir des laboratoires** afin d'exécuter des essais sur le béton, l'agrégat, le ciment, l'acier, les plastiques et les sols.

- **Jouer le rôle de Conseil** auprès des chefs de chantier et effectuer des contrôles de qualité de la production.

- **Faire des recherches appliquées** en vue de développer les moyens et méthodes d'essai des matériaux.

Depuis peu, ce centre travaille pour mettre au point des méthodes d'essai non destructives, des méthodes ultrasoniques et radiographiques pour le métal et des méthodes d'émission acoustique pour le béton.

- **Faire des études comparées** sur les technologies de la construction pour le transfert des « savoir-faire » appropriés, rentables et compatibles.

- **Réunir, traiter et publier l'information.**

A cet effet, ENKA est membre titulaire des organismes suivants ASTM, DIN, ACI, RILEM, ASM, SSPC, BRE, Concrete Society.

- **Former des techniciens** destinés aux travaux de contrôle de qualité et de laboratoire.

La répartition en pourcentage de l'activité de notre centre peut se résumer ainsi :

Recherche et Développement : 40 %
Essais et Contrôle : 40 %
Formation : 20 %

**THE US ARMY CONSTRUCTION
ENGINEERING RESEARCH LABORATORY**

Champaign, Illinois, USA

The US Army Construction Engineering Research Laboratory (USA-CERL) was established in Champaign, Illinois, in 1968 by the US Army Corps of Engineers. A staff of over 200 divided among the four technical divisions at the laboratory conducts research that is designed to support Army programs in military construction, operations and maintenance, military engineering and civil works. Improving construction quality and energy efficiency while safeguarding the environment are primary goals. The exchange of information with universities, other US Department of Defense engineering and construction activities and government agencies, and the private sector is emphasized.

The Engineering and Materials Division conducts research and development studies to advance military technology in the field of metallic and nonmetallic materials, materials science and synthesis for the improvement of the design, construction, maintenance and repair of military and civil works facilities. Studies of material characteristics and performance as related to facilities designed to resist earthquakes, nuclear weapons shock and the accompanying electromagnetic influence are included. Particular emphasis is placed on developing construction quality control procedures and equipment, protective coatings, corrosion

mitigation and maintenance management techniques, and on introducing new materials. Testing facilities include a load frame with the capability to simulate static loads up to one million pounds (4.45 MN) and dynamic loads up to 500,000 pounds (2.25 MN). A 12-foot (3.7 m) square, biaxial shock test machine is capable of operating from 0 to 200 Hz and can accelerate a 12,000-pound (5,450 kg) mass up to 20 times the force of gravity horizontally and up to 40 times vertically.

The Energy Systems Division develops methods, technology and criteria for energy conservation in new and existing facilities, for energy management and for the use of alternate energy sources. ES Division is developing and evaluating building energy analysis methods and procedures using manual and computerized techniques, and methods for energy conservation in all phases of the military construction cycle. ES Division is also developing techniques and application criteria for solar heating and cooling, and for photovoltaic systems. The ES Division is currently working closely with industry to develop retrofit control panels that operate heating, ventilating, and air-conditioning systems more efficiently.

The Environmental Division develops technology for controlling air and water pollution; managing environmental quality at Army installations; and main-

taining training lands in support of Army training, readiness and mobilization missions. Knowledge of environmental effects has led to the development of systems for assessing the environmental impacts associated with Army activities, and for managing environmental quality during the life cycle of military facilities. EN Division has transferred its Environmental Technical Information System to the Army and the private sector, implemented its installation compatible use noise zone program, and developed water conservation and reuse technology guidance for installations and for rapid deployment.

The Facility Systems Division conducts research on management engineering for the planning, design, construction, operation and maintenance of military and civil works facilities; and methods for enhancing the livability of military installations. FS Division integrates computer programs that are designed to support planning, architectural and engineering design, operations maintenance and real estate, and the development of decision support system to improve analysis and decision-making capabilities. FS Division also researches various forms of systems building procurement, and uses basic economic information to establish criteria and techniques for selecting the most economical form of systems building for the various facility types in civil and military construction.