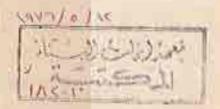
EGYPTIAN SOCIETY OF ENGINEERS

INSTITUTION OF CIVIL ENGINEERS\_ICE

SYMPOSIUM WOOD

ON



PREFABRICATED CONCRETE STRUCTURES

CAIRO 9 - 25/3/1974

SUMMARY OF LECTURE

ON

TECHNOLOGY AND PLANT DESIGN

Shoke 7955

BY

Dr. ABDEL - HADY HOSNY

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# CHARACTERISTICS OF PREFABRICATED CONCRETE STRUCTURES

- . PRODUCTION OF ELEMENTS
- TRANSPORTATION
- . ERECTION & FINISHING

EACH OF THE ABOVE CHARACTERS IS DIRECTLY INFLUENCED

BY THE OTHERS, FOR EXAMPLE WHEN CHOOSING

THE SIZE AND SHAPE OF ELEMENTS, THE TRANSPORTATION

AND ERECTION FACILITIES SHOULD BE CONSIDERED.

# CLASSIFICATION OF PRODUCTS

#### . SMALL UNITS

BRICKS\_ TILES \_ ETC

SMALL BEAMS OF SLABS TO BE ASSEMBLED MANUALLY

Fince 1964 a

## MEDIUM UNITS

WEIGHT UP TO 121 NEEDS CRANES FOR ERECTION. SIZE &
WEIGHT LIMITED ACCORDING TO TRANSPORTATION DISTANCES &
FACILITIES

### . HEAVY UNITS

PREFABRICATED ON SITE OR NEARBY, SOMETIMES
NEED SPECIAL CRANES OR JACKS

- . ECONOMY IN FORMWORK & SHUTTERING
- . ECONOMY THROUGH MASS PRODUCTION AND STANDARDISATION,
  LESS LABOUR, INCREASED PRODUCTIVITY.
- . EMPLOYMENT OF SKILLED LABOUR AT THE FACTORY

  UNDER BETTER CONDITIONS AND FACILITIES.

  LESS NO OF SKILLED & SPECIALIZID LABOUR ON SITE.
- . FACTORY PRODUCTS NOT AFFECTED BY WEATHER
- . SPEED OF CONSTRUCTION ON SITE.
- . ELEMENTS ASSEMBLED BY BOLTED JOINTS CAN BE DISMANTLED AND MOVED IF REQUIRED
- BETTER TECHNICAL CONTROL IN THE FACTORY :-
  - CONTROL OF CONCRETE MIX
  - \_\_ ACCURATE & CORRECT FLACEMENT OF REINFORCEMENT
  - \_ APPROPRIATE METHODS FOR CURING
  - \_ ACCELERATE MATURING BY USE OF STEAM CURING
  - \_ POSSIBLE TESTING OF ELEMENTS
- . SHRINKAGE & CREEP EFFECTS ARE REDUCED.
- . DUE TO BETTER CONTROL, MANY BUILDING REGULATIONS
  ALLOW:\_
  - HIGHER STRESSES, OR LESS SAFETY FACTORS
    THAN FOR INSITU CONSTRUCTION
  - \_\_ LESS DIMENSIONS ARE ACHIEVED