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TRIPARTITE REVIEW AND PROJECT DISCUSSION CONCERNING
CEMENT RESEARCH AND DEVELOPMENT CENTRE

TURKEY

(DP/TUR/72/034)

Report prepared for the Government of Turkey

by

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United Nations Industrial Development Organization
acting as Executing Agency for the
United Nations Development Programme

id.75-8140

We regret that some of the pages in the microfiche copy of this report may not be up to the proper legibility standards even though the best possible copy was used for preparing the master fiche

I. SUMMARY

The staff member participated in a Tripartite Review meeting and assisted in drafting the meeting report.

The cement project has responded well to assistance requirements in the cement industry and a project extension is now planned so that support, both to the Cement Industry and to the Cement Research Development Centre can be strengthened.

Expert fielding was reprogrammed and the fielding of a number of short-term experts was discussed.

II. INTRODUCTION

UNIDO assistance to the Turkish Cement Industry was initiated by a fact-finding mission in 1973.

As result of the mission a Cement Development and Research Centre project was established and project activities started in January 1974.

The aim of the project was oriented towards assisting the cement industry in improving the productivity through direct expert assistance to the cement factories.

The experts were expected to participate in the building-up of a nucleus of Turkish experts, who, operating from the above-mentioned Centre, could gradually take over the duties of the international experts. The experts were also expected to advise on the establishment of the Centre.

The original project was drafted for only two years and many changes occurred during the time up to the present Tripartite Review.

The progress made in the project has encouraged the Turkish Government to request an extension of the project activities up to 1979. It therefore became necessary to organize a review and a programming meeting with participation of the Substantive supervising officer from UNIDO so that maximum project continuity and efficiency can be secured in the project.

III. TIMING OF THE MISSION

The staff member arrived on 8 October and departed on 14 October 1975.

The Tripartite Review meeting was organised on 9 October and other meetings took place in the Embassy of the Federal Republic of Germany and the Embassy of France in Turkey respectively on 10 and 13 October 1975.

Working sessions were held in UNDP office and the Office of the State Cement Industry (CISAN) in Ankara.

IV. OFFICIALS MET DURING THE MISSION

UNDP/UNIDO :

Mr. M. Kulesa, Deputy Resident Representative
Mr. B. Radovic, Assistant Resident Representative
Mr. S. Abaffy, Project Manager

Government :

Mr. I. Yurt, State Planning Organisation
Dr. F. Yagis, CISAN

Other Officials :

Mr. Dugoujard, Conseiller Economique et Commercial,
Ambassade de France
Dr. G. Adamek, Entwicklungshilfereferent
Botschaft des Bundesrepublik Deutschland

V. FINDINGS, CONCLUSIONS and RECOMMENDATIONS

The development of a Cement Research and Development Centre, to serve the Turkish Cement Industry is progressing well. Present project activities are centered around establishing a close link between cement factories and the developing centre.

The centre itself is still accommodated within the facilities of the main office of the State Cement Company, CISAN, but the building of a separate research and development complex outside Ankara has already started and some offices and laboratories should be under roof next year unless weather conditions delay the construction.

Equipment and spare parts ordering has started and a fully equipped mobile clinic, for calibration and repair of electrical process control instruments, has arrived and started on its first training mission to selected factories. The delivery of the mobile clinic was delayed with approximately ten months, from seven to seventeen months, because both elaboration of specifications and delivery of the mobile clinic took longer than anticipated.

The expert for electrical process control instruments was fielded in January 1974 and started immediately, together with counterparts, to organize training courses in the factories and to prepare for the building up of center facilities in accordance with established plans.

The original development idea, to eliminate the need for foreign know-how for maintenance and calibration of instruments and then to improve productivity and fuel economy, when the instruments are in order, is still valid. The cement technology expert is now anticipated to be fielded in 1976 and the concrete technology expert is planned for 1977. Their work will be devoted to trouble shooting, training of factory personnel as well as assisting in the establishment of the Cement Research and Development Centre as the future service institute for the cement industry.

Short-term experts were foreseen to support the project activities in 1974, but earlier mentioned delays also delayed efficient use of experts and a reprogramming of activities was necessary. The following short-term

experts were preliminarily discussed during the mission and might be requested from UNIDO to support the project in 1976 and/or 1977:

- A. Expert in Testing of Cement and Raw Materials
- B. Expert in Cement Packing and Handling
- C. Expert in Optimization of Cement Mill and Kiln Productivity
- D. Expert in Pollution Monitoring and Control
- E. Expert in Centralized Spare Part Storage
- F. Expert in Preventive and General Maintenance of Cement Making Equipment
- G. Expert in Alloy Design for Grinding Media
- H. Expert in Maintenance and Repair of Diesel Engines
- I. Expert in Maintenance and Repair of Power Generators
- K. Expert in Converting Firing Systems to Use of Natural Gas

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The coordination of the above activities together with reprogrammed and continuing assistance to the cement industry require the responsibility for technical backstopping partly delegated to the field by establishing the first expert post (Process Control Equipment Expert) as a project manager post through which Turkish counterparts can operate the project and establish a unified reporting system for all cement project activities. The revised Job Description for the Process Control Equipment Expert (Project Manager Designate) as well as draft Job Descriptions for the above-mentioned short-term experts are attached to the present report.

The Tripartite Review meeting took place on 9 October 1975 and gave all parties concerned the opportunity to review and discuss the project.

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The project was reprogrammed and expanded from US\$ 269,500 to US\$ 610,639 for which final approval is expected in the near future. The meeting report with the revised budget is attached as Annex I to the present report.

In addition to meetings held with UNDP and Government officials, the writer was invited to participate in Turkish meetings with officials from the Embassy of France and the Federal Republic of Germany during which UNIDO work in the cement project was explained. The possibility of bilateral assistance was mentioned as possible support action for the ongoing UNIDO assistance to the Turkish Cement Industry.

ACTION TO BE TAKEN BY UNDP/UNIDO:

To submit the present report to the Turkish Government.

ACTION TO BE CONSIDERED BY THE TURKISH GOVERNMENT AND OFFICIALS
FROM THE CEMENT INDUSTRY:

To review Job Descriptions for short-term consultants and request project manager through UNDP/UNIDO to initiate recruitment action for selected activities.

The Government might consider experts known to the Turkish authorities be nominated by name to facilitate speedy recruitment action.

ANNEX I

tripartiate review meeting 9.10.1975 concerning Cement Development and Research Centre TUR/72/034.

Present: Government Mr.I.Yurt, SPO
 Dr.F.Yağız, CİSAN
UNDP Mr.B.Radovic, Ass.Res.Rep.
UNIDO Mr.C.Rydeng
 Mr.S.Abaffy

The meeting started with a review of the progress made in the project and it was reported that the project activities had met their objectives in general terms and only a delayed delivery of equipment had held back the full training programme which was visualized when the project was drafted in 1973.

The delivery time for the equipment had increased with ten months to a total of 17 months compared with an anticipated delivery time of only 7 months. Consequently a delay in the fielding of experts had to be introduced because their activities were dependant on the availability of the equipment. Planned training programmes have been implemented and bilateral support has been promoted. The Turkish Government has expressed its satisfaction with the progress in the project and has requested a revision of the project so the current situation is reflected in the actual programme. The Government has further requested a continuation of the project activities as proposed in the first project document. As preparation for the meeting the government had worked out a programme proposal which was presented and discussed at the meeting.

The main points which were supported by all present were:

- A. Extension of process control expert service with 24 months to a total of 54 months.
- B. Reprogramming of Cement technology expert service to start July 1976 and be extended with 12 months to a total of 24 months.
- C. Reprogramming of Concrete technology expert service to start January 1977 and be extended with six months. to a total of 18 months.
- D. Reprogramming of short term consultants to start only 1976 and be

Mr. C. Rydeng *[Signature]* *[Signature]*

extended with 18 months distributed with 9 months 1976, 12 months 1977 and 9 months 1978 giving a new total of 30 months.

E. Introduce the service of a Raw material Expert for 12 months starting January 1977.

F. Expand the Fellowship training programme with 33 man/months. The training is anticipated to take place in European countries which have supplied Cement Equipment to Turkey.

G. Increase the Equipment component to include equipment for training and training-aids US \$ 17.500, Supplementary material for the information and documentation unit US \$ 25.000, Additional Laboratory equipment for the Cement and Concrete Laboratory US \$ 50.000 and US \$ 5000 for a project vehicle.

The above expenditures are planned with US \$ 40.000 in 1976 and 57.500 in 1977. US \$ 60.000 were already invested in a mobile process control Laboratory which was delivered in 1975. The new total therefore is US \$ 157.500 for 1978 which have now been included in the programme.

H. Sundry and Miscellaneous is expended with US \$ 1000 each for 1977 and 1978 which have now been included in the programme.

It was further decided that all project activities should be coordinated by Mr. Abaffy in cooperation with Mr. F. Yagiz and that Mr. Abaffy should, besides continuing his duties as process control expert, have the title as project manager. The new raw material expert (E) is introduced as a strengthening of the government activities to facilitate full use of bilateral assistance expected to amount to DM.1.5-2.0 million.

The revised programme will amount to a UNDP input of US \$ 610639 compared with earlier approved US \$ 269 500. Expert assistance now amounts to US \$ 408 150, training US \$ 39 989, Equipment US \$ 157.500 and Sundry and miscellaneous 5000 . The additional programme allotment now requested from UNDP is US \$ 341.139.

Ankara, 9. October. 1975

E. Gyöngy

W. Samuelsen

PROJECT REVISION BUDGET COVERING UNDP CONTRIBUTION
in US Dollars

Country: TURKEY

Title: Cement Development and Research Centre

Project No.: TUR/72/034

	TOTAL		1974		1975		1976		1977		1978	
	m/m	\$	m/m	\$	m/m	\$	m/m	\$	m/m	\$	m/m	\$
10. Project personnel												
11. Experts												
11.01 Process control equipment expert and project manager UNIDO	54	11.7	12		12		12		12		12	6.3
11.02 Cement technology expert UNIDO	24			6			6				12	6
11.03 Concrete technology expert UNIDO	18				9						12	6
11.04 Short-term consultants UNIDO	30										12	9
11.05 Raw-material techn. expert UNIDO	12										12	
19. COMPONENT TOTAL	138	408 190	11.7	29 250	12	36 000	27	81 000	60	180 000	27.3	81 900
30. Training												
31. Fellowships												
31.01 Process control equipment	20	16 660	5.6	4 670	9.4	7 830	1	833	4	3 332		
31.02 Cement technology	6	4 998					6	4 998				
31.03 Concrete technology	6	4 998							6	4 998		
31.04 Raw material technology	8	6 664					8	6 664				
31.05 Information and Documentation	8	6 664					4	3 332	4	3 332		
39. COMPONENT TOTAL	48	39 989	5.6	4 670	9.4	7 830	19	15 827	14	11 662		
40. Equipment												
42. Non-expendable equipment		157 500				60 000		40 000		57 500		
49. COMPONENT TOTAL		157 500				60 000		40 000		57 500		
50. Miscellaneous		5 000		1 000		1 000		1 000		1 000		1 000
59. COMPONENT TOTAL		5 000		1 000		1 000		1 000		1 000		1 000
99. GRAND TOTAL		610 639		34 920		104 830		137 827		250 162		82 900

E. P. ...
Chicago

V. Jamungorn

W. ...

DRAFT

Request from the Government of Turkey
for

Technical Assistance

JOB DESCRIPTION

DP/TUR/72/034/11-01/03 (Rev. 1)

Post Title: Project Manager/Cement Process Control Equipment Expert

Duration: One year, with possibility of extension

Date required: As soon as possible

Duty Station: Ankara, with travel in the country

Duties: The expert will be attached to the Government of Turkey and the Cement Manufacturers Association and will assist and advise in coordinating and supervising all development activities in the cement project.

In addition, the expert will be expected to:

- advise and assist in the training of the factory personnel in daily maintenance and repair of automatic process control equipment and recorders;
- advise and assist in the training of headquarters personnel in detailed maintenance repair and calibration of a process control equipment and recorders;
- assist in the selection of equipment needed for service facilities in the centre and in the factories;
- advise on the selection of spare parts to be stored centrally in the centre and in the factories and advise on the equipment of a mobile clinic to assist headquarter staff and factory staff in their work.

Language: English

Qualifications: Electrical engineer with knowledge of process control equipment in the cement industry or a similar industry.

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**Background
Information:**

The first cement plant in Turkey was set up at Darica, Istanbul, in 1911 with an annual capacity of 20,000 tons. This plant was expanded in 1923. Other factories and expansions followed in the period from 1923 to 1960 where the installed capacity passed 2 million tons per year. Participating in the development and playing a role of growing importance since its establishment in 1953, the Turkish Cement Industry Corporation has now a dominating position in the cement industry. The accelerated development of the cement industry is illustrated by the rapid doubling of both production and consumption. From about 2 million tons in 1960, 4 million was reached in 1966 and 8 million in 1972. The rapid growth of the cement industry in the past and projected growth in the future combined with the introduction of large and sophisticated plants with modern process control equipment has not enabled the cement industry to train sufficient personnel to maintain and use the principles of modern production control in the factories. Process and plants are designed abroad and the factories are erected and commissioned under supervision of foreign experts. When local personnel continue operation after the guaranteed performance has been reached and plants taken over, a deteriorating performance has been experienced. In particular production size and economy have suffered because the instrumentation without proper maintenance has failed to record important production parameters. The results have been large, and incidental variations in production increase both fuel consumption and wear on equipment.

Consequently, UNIDO assistance is requested to improve the situation.

DRAFT

Request from the Government of Turkey
for
Technical Assistance

JOB DESCRIPTION
DP/TUR/72/034/11-04/03 (A)

Post Title: Expert in Testing of Cement and Raw Materials

Duration: Two months with possible extension

Date required: As soon as possible

Duty Station: Ankara with travel in the country

Duties: The expert will be attached to the Government of Turkey and will in close cooperation with the Project Manager and Turkish experts advise and assist in planning future cement and raw materials testing and specify the equipment required for the above testing.

Language: English

Qualifications: Industrial Engineer with relevant experience from the cement field.

Background Information: As in job description for Project Manager post.

DRAFT

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Request from the Government of Turkey

for

Technical Assistance

JOB DESCRIPTION

DP/TUR/72/034/11-04/03 (B)

Post Title: Expert in Cement Packing and Handling

Duration: Two months with possible extension

Date required: As soon as possible

Duty station: Ankara with travel in the country

Duties: The expert will be attached to the Government of Turkey and will in close cooperation with the Project Manager and Turkish Experts advise and assist the cement industry in improving cement packing and handling procedures.

Language: English

Qualifications: Industrial Engineer with relevant experience from the cement field.

Background Information: As in Job Description for Project Manager post.
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DRAFT

Request from the Government of Turkey

for

TECHNICAL ASSISTANCE

JOB DESCRIPTION

DP/TUR/72/034/11-04/03 (C)

Post Title: Expert in Optimisation of Cement Kiln and Mill Productivity

Durations: Two months with possible extension

Date required: As soon as possible

Duty station: Ankara with travel in the country

Duties: The expert will be attached to the Government of Turkey and will in close cooperation with the Project Manager and Turkish Experts advise and assist the cement industry in optimisation of cement kiln and mill productivity.

Language: English

Qualifications: Industrial Engineer with relevant experience from the cement field.

Background Information: As in Job Description for Project Manager post.

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DRAFT

Request from the Government of Turkey

for

TECHNICAL ASSISTANCE

JOB DESCRIPTION

DP/TUR/72/034/11-04/03 (D)

Post Title: Expert in Pollution monitoring and control

Duration: Two months with possible extension

Date required: As soon as possible

Duty station: Ankara with travel in the country

Duties: The expert will be attached to the Government of Turkey and will in close cooperation with the Project Manager and Turkish Experts advise and assist the cement industry in introducing pollution monitoring and control around and in selected cement factories.

Language: English

Qualifications: Industrial engineer with relevant experience from the cement field.

Background Information: As in Job Description for Project Manager post.

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DRAFT

Request from the Government of Turkey

for

TECHNICAL ASSISTANCE

JOB DESCRIPTION

EP/TUR/72/034/11-04/03 (E)

Post Title: Expert in centralized spare part storage

Duration: Two months with possible extension

Date required: As soon as possible

Duty station: Ankara with travel in the country

Duties: The expert will be attached to the Government of Turkey and will in close cooperation with the Project Manager and Turkish Experts advise and assist the cement industry in preparing for the development of central spare part storage for the cement industry.

Language: English

Qualifications: Industrial engineer with relevant experience from the cement field.

Background Information: As in Job Description for Project Manager post.

DRAFT

Request from the Government of Turkey

for

TECHNICAL ASSISTANCE

JOB DESCRIPTION

DP/TUR/72/034/11-04/03 (F)

Post title: Expert in prevention and general maintenance of cement making equipment

Duration: Two months with possible extension

Date required: As soon as possible

Duty station: Ankara with travel in the country

Duties: The expert will be attached to the Government of Turkey and will in close cooperation with the Project Manager and Turkish Experts advise and assist the cement industry in planning and executing preventive of cement making equipment.

Language: English

Qualifications: Mechanical Engineer with relevant experience from preventive and general maintenance of cement making equipment.

Background Information: As in Job Description for Project Manager post.

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DRAFT

Request from the Government of Turkey

for

TECHNICAL ASSISTANCE

JOB DESCRIPTION

DP/TUR/72/034/11-04/03 (G)

Post Title: Expert in Alloy Design for Grinding Media

Duration: Two months with possible extension

Date required: As soon as possible

Duty stations: Ankara with travel in the country

Duties: The expert will be attached to the Government of Turkey and will in close cooperation with the Project Manager and Turkish Experts advise and assist in improving the production of grinding media for tube mills by specifying and helping in introducing suitable alloys in the production.

Language: English

Qualifications: Metallurgist with relevant experience from steel alloy design and casting.

Background Information: As in Job Description for Project Manager post.

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DRAFT

Request from the Government of Turkey

for

TECHNICAL ASSISTANCE

JOB DESCRIPTION

DP/TUR/72/034/11-04/03 (H)

Post Title: Expert in Maintenance and Repair of Diesel Engines

Duration: Two months with possible extension

Date required: As soon as possible

Duty Station: Ankara with travel in the country

Duties: The expert will be attached to the Government of Turkey and will in close cooperation with the Project Manager and Turkish Experts advise and assist in planning and executing main repairs of diesel engines and in introducing preventive maintenance of the same units.

Language: English

Qualifications: Mechanical engineer with relevant experience in maintenance and repair of diesel engines.

Background Information: As in Job Description for Project Manager post.

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DRAFT

Request from the Government of Turkey

for

TECHNICAL ASSISTANCE

JOB DESCRIPTION

DP/TUR/72/034/11-04/03 (I)

Post Title: Expert in Maintenance and Repair of Power Generators

Duration: Two months with possible extension

Date required: As soon as possible

Duty station: Ankara with travel in the country

Duties: The expert will be attached to the Government of Turkey and will in close cooperation with the Project Manager and Turkish Experts advise and assist in planning and executing repairs of power generators and in introducing preventive maintenance of the same units.

Language: English

Qualifications: Electrical engineer with relevant experience in maintenance and repair of power generators.

Background Information: As in Job Description for Project Manager post.

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DRAFT

Request from the Government of Turkey
for

TECHNICAL ASSISTANCE

JOB DESCRIPTION

DP/TUR/72/034/11-04/03 (K)

Post Title: Expert in converting firing systems to use of natural gas

Duration: Two months with possible extension

Date required: As soon as possible

Duty station: Ankara with travel in the country

Duties: The expert will be attached to the Government of Turkey and will in close cooperation with the Project Manager and Turkish Experts advise and assist in studying alternative firing systems for natural gas and in planning conversion of selected factories to firing of natural gas.

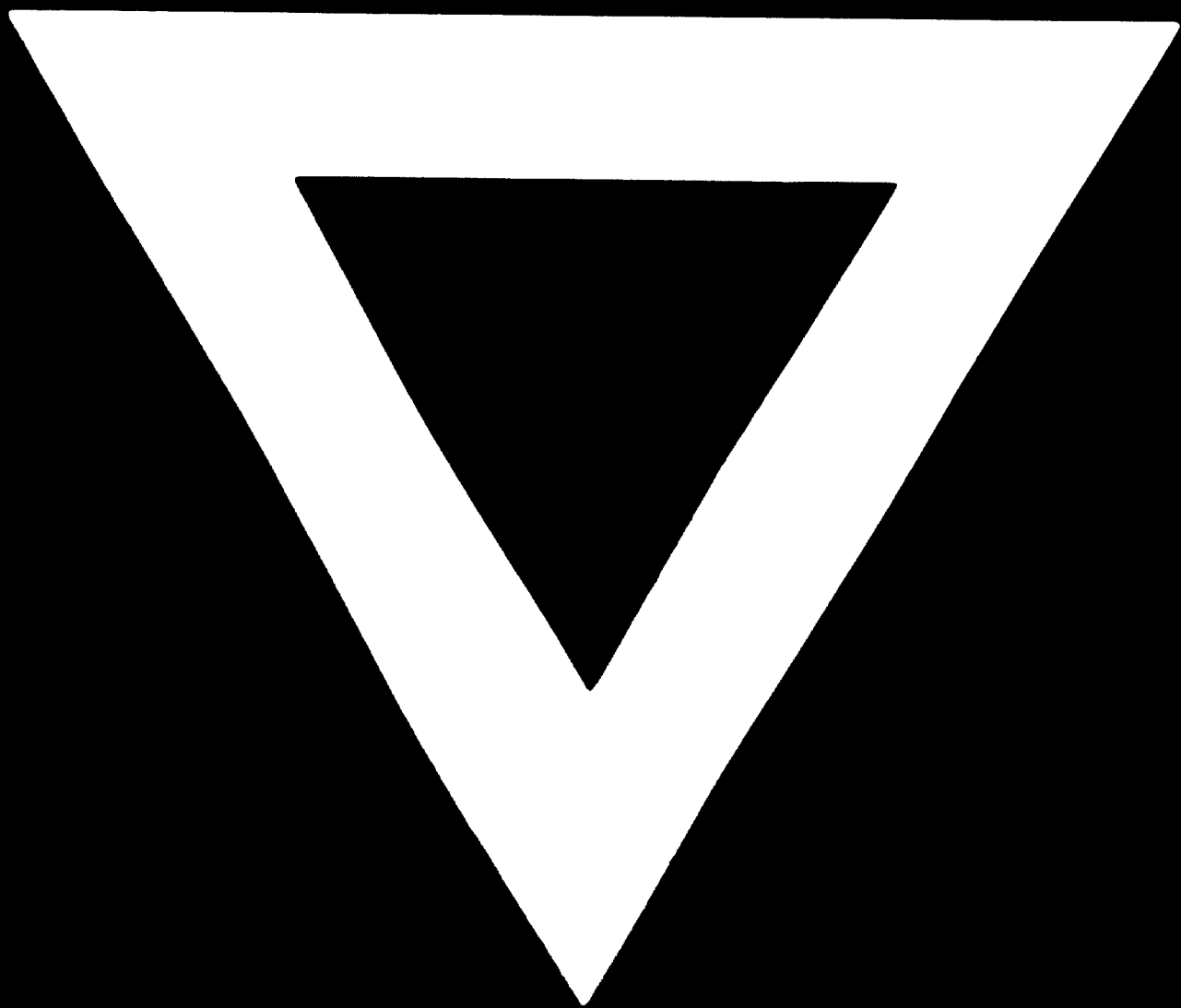
Language: English

Qualifications: Industrial engineer with relevant experience from the cement field.

Background Information: As in Job Description for Project Manager post.

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