

PD-ABF-248

ISA 75847

7.5 T/D NYLON EXPANSION PROJECT

AID Loan No. 489-H-036

FINAL REPORT

F o r

April 1967—July 1968

PREPARED BY

KOREA NYLON COMPANY

F O R

KOREAN GOVERNMENT

A N D

UNITED STATES

DEPARTMENT OF STATE

AGENCY FOR INTERNATIONAL DEVELOPMENT

A.I.D.
Reference Center
Room 1656 NS

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SUMMARY

With close mutual efforts of Kolon and Chemtex, and along with kind assistance of USAID, Korea, our 7.5 M/T Expansion Project (hereinafter the Project) was successfully completed except some minor problems which will be settled shortly.

During the life of the Project, seven American engineers or total 603 men/day engineering labor power came to Kolon to assist the Project and 139,864 men/day domestic labor power were put into the Project.

Except some minor design change, there have been no major difficulties in the engineering field by virtue of our past experiences in constructing the existing 2.5 M/T plant.

Chemtex had purchased and delivered US\$5,810,000 worth equipments and machineries and drawn US\$5,560,000. The balance of US\$250,000 is held by AID in accordance with Para. B Article IV of the Fixed Price Contract. Local currency of 657 million Won was being spent for the project as of the end of June, 1968 and total Won requirement would be 700 million Won. This actual investment figure proved accuracy in estimating the total cost schedule established at the beginning of the Project.

The completion of the Project was delayed by two months behind the original time schedule due to the delay in delivery of loan equipment as stated in the Chapter III of this report.

I. HISTORY

Followings are brief history of our 7.5 M/T Expansion Project. Monthly Progress Report No. 1 submitted to USAID Aug. 22, 1967 provides additional information for our project history.

Brief History of the Project

1. Mar. 1964 Approval of the Project by ROK Government
2. Feb. 1965 Transmittal of Loan Application to AID
3. May 12, 1966 Formal Announcement of Loan Approval
4. June 15, 1966 Execution of Loan Agreement
5. Nov. 30, 1966 Signing of Engineering Service Contract
6. Feb. 6, 1967 Issuance of Letter of Commitment
7. Mar. 22, 1967 Establishment of Letter of Credit
8. Apr. 8, 1967 Ground-breaking Ceremony
9. Aug. 5, 1967 First Arrival of Loan Equipment
10. Nov. 1967 Commencement of Installation of the Equipment
11. Mar. 3, 1968 Commencement of Skid Test Run
12. Apr. 1968 Completion of Main Plant Building
13. Aug. 1, 1968 Commencement of Overall Test Run

II. ENGINEERING ACTIVITIES

In accordance with Article II of Fixed Price Contract signed on November 30, 1966, Chemtex has been directing the entire Project providing major drawings, technical supervision of assembly, erection, installation and test operation of the Project.

Some minor modification of designs and drawings were required but there was no important change to the original plan.

For technical supervision of assembly, erection, installation and test operation of the Project, several Chemtex engineers have been sent to the job site. In the meantime several process engineers of Kolon were also sent to Japan for training.

The detailed lists of technical information and data provided by Chemtex were shown on our Monthly Progress Reports submitted to USAID previously. Staying Status of foreign engineers are, for your information, revealed in the following table.

SUBJECT: Staying Status of Foreign Engineers (7.5 Ton Expansion Plant)

<u>Name</u>	<u>Arrival</u>	<u>Departure</u>	<u>Staying Period</u>
F. Rickinson	67/10.13	68/8.15	307
N. W. Rooker	68/1.18	68/1.25	7
	68/3.1	68/4.12	42
	68/6.11	68/7.8	27
	68/7.12	68/7.29	17
E. Goossens	68/1.18	68/2.7	20
F. Milera	67/12.28	68/3.22	86
C. Martin	68/2.29	68/3.27	27
H. E. Robisin	68/3.6	68/3.39	24
Sang Man Lee	68/6.29	68/8.15	47
			<u>603</u>

(93)

III. CONSTRUCTION ACTIVITIES

Kolon set up, with Chemtex' understanding, to complete construction, erection, installation and start-up of the Project by early March 1968, though Chemtex' legal obligation was to complete the Project by late September 1968.

Sporadic but constant workers' strike, such as plant workers, transportation workers and pier workers in States, forced us to postpone the schedule for two months average.

Main building construction and other subsidiary buildings construction have accordingly been delayed to match with the overall start-up schedule.

Following table shows the change of schedule in detail.

Comparison of the Actual Completion dates
to Estimated Completion dates of Various Area

<u>Description</u>	<u>Estimated</u>	<u>Actual</u>	<u>Name of Contractor</u>
Main Plant	1968. 1	1968. 4	Sam Hwan Enterp. Co.
Power House	1967. 9	1968. 3	"
Men's Dormitory	1967. 12	1968. 3	"
Women's Dormitory	1967. 12	1968. 3	"
B.O.Q.	1967. 12	1968. 5	"
Mess Hall	1967. 12	1968. 4	"
Guard House	1967. 12	1968. 3	"
Polymerization	1968. 1	1968. 4	
Spinning	1968. 2	1968. 3	
Utilities	1968. 1	1968. 4	
Firns & Carton Warehouse	1967. 11	1967. 12	Hwa Sung Ind. Co.
Machine Shop	1967. 11	1967. 12	"

IV. FINANCIAL DATA

1. AID Loan Fund

After issuance of the Letter of Commitment, AID disbursed US\$871,500, mobilization payment of the project to Chemtex Inc. on April 22, 1967.

As the following chart shows, the AID Loan Funds' have been drawn on scheduled. Remaining US\$250,000 are retained in accordance with Para. B Article IV of 7.5 M/T Fixed Price Contract.

Monthly Disbursement of AID Loan No. 489-H-036

April 1967	\$ 871,500.00
August 1967	290,221.91
September 1967	695,441.00
October 1967	564,348.21
November 1967	1,541,978.67
December 1967	930,550.55
January 1968	381,193.62
February 1968	264,078.57
March 1968	20,687.40
<u>Total</u>	<u>\$ 5,560,000.00</u>

RECORD SHEET

KOREA NYLON CO., LTD.

CODE NO. _____

SHEET NO. _____

DATE _____

BY _____

SUBJECT _____

AMOUNT

1 2 3 4 5 6 7 8 9 10 11 12 1 2 3

1967

CONSTRUCTION NUMBER
vs. ACTUAL EXPENDITURE

ACTUAL DOLLAR
EXPENDITURES

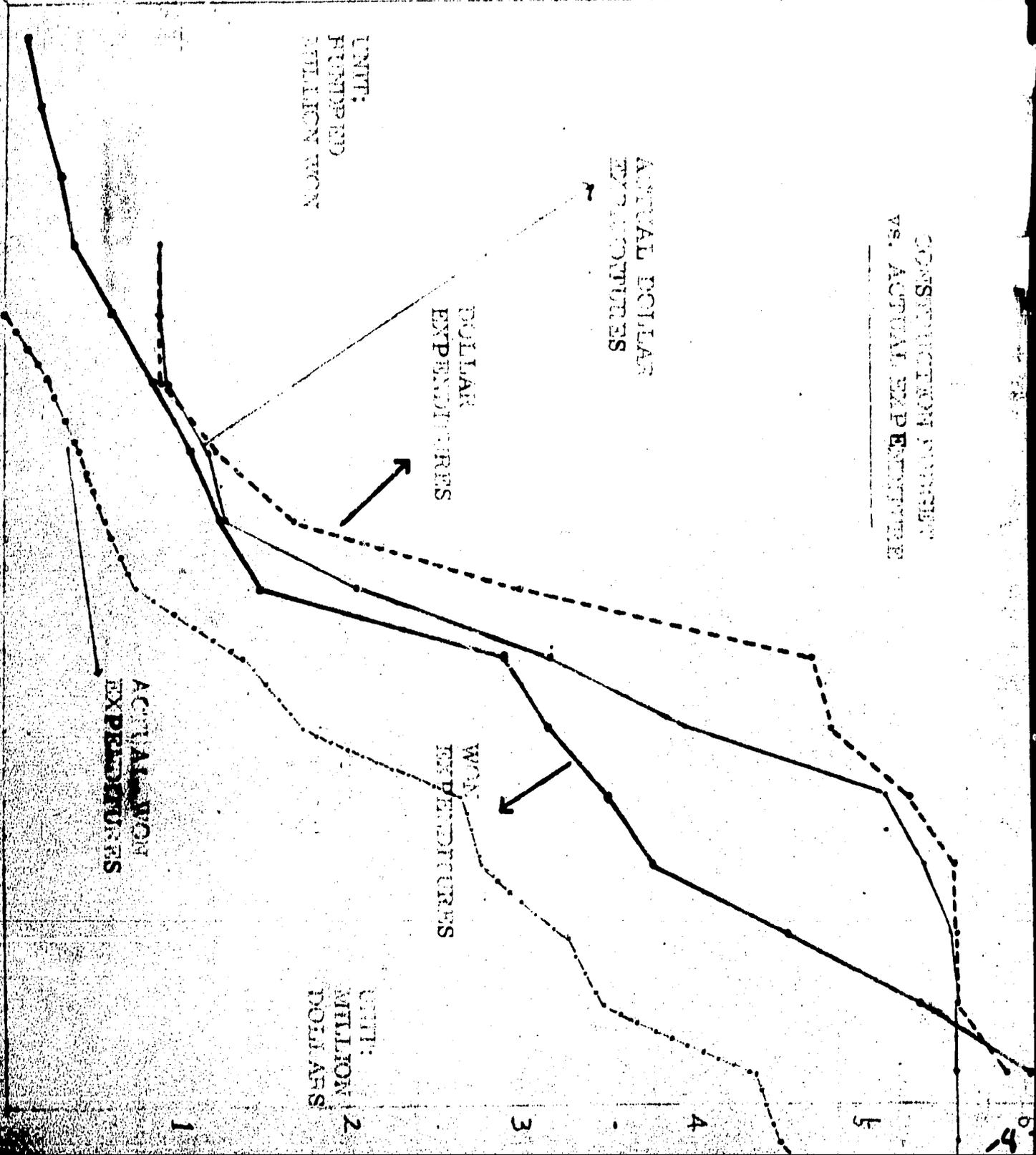
DOLLAR
EXPENDITURES

WON
EXPENDITURES

ACTUAL WON
EXPENDITURES

UNIT:
HUNDRED
MILLION WON

UNIT:
MILLION
DOLLARS



2. Local Currency

As the chart "Construction Budget vs. Actual Expenditure" shows, the expenditure of local currency is less than the estimated local currency expenditure.

Local currency expenditure was estimated ₩722,500,000 but the actual expenditure was ₩657,165,648 as of the end of June 1968. As the temporary calculation of local currency expenditure during July shows approximately ₩40,000,000, the total expenditure of local currency would reach nearly ₩700,000,000. Therefore, there would not be much difference between estimated and actual expenditure of local currency.

Following table shows the actual expenditure of the local currency as of the end of June 1968.

Expenditures on 7.5 M/T Expansion Project
(Local Currency)

Unit: Won

<u>Items</u>	<u>Amount</u>
1. Bldgs. Construction Works	334,612,739
2. Structures	24,886,441
3. Preliminary Works (including fabrication & installation works)	93,951,248
4. Tools and Fixtures	6,789,982
5. Temporary Works	1,123,107
Sub-Total	461,353,517
6. Salaries and Wages	15,611,526
7. Welfare Exp.	3,510,720
8. Office Exp.	1,812,821
9. Travel Exp.	895,804
10. Communication Exp.	92,102
11. Consumables	1,729,951
12. Engineers Stay Exp.	4,207,054
13. L/C Opening Charge	3,921,055
14. Entertainment Exp.	16,225,872
15. Interest on AID Loan	54,499,821.54
16. Delivery Exp. (including customs clearance)	17,364,446
17. Conference Exp.	1,873,250
18. Storage	164,738

Expenditures on 7.5 M/T Expansion Project (cont'd)
(Local Currency)

<u>Items</u>	<u>Amount</u>
19. Other Exp.	4,327,470
20. Utility	837,825
21. Insurance Premium	4,150,790
22. Test Operation Exp. (including raw material cost)	64,586,976
Sub-Total	195,812,131.54
<u>Total</u>	<u>657,165,648.54</u>

V. PERSONNEL

Total 139,804 men/day labor power were put into the Project since the ground-breaking of the Project. Main plant building required 39,568 men/day labor power, men's and women's dormitory required 22,360, and mess hall required 12,803.

Except the Korean Thanksgiving Days in September 1967, there wasn't labor shortage during the life of the Project.

Shown below are total labor force put into the Project.

<u>Name of Work</u>	<u>Contractor</u>	<u>Kolon</u>	<u>Total</u>
Main Plant Bldg.	38,971	597	39,568
Dormitory	22,256	104	22,360
Mess Hall	12,737	66	12,803
Other Const. Works	61,345	3,788	65,133
<u>Total</u>	<u>135,309</u>	<u>4,555</u>	<u>139,864</u>

Labor Force Employed by Month

	<u>Main Plant Bldg.</u>	<u>Other Const. Works</u>	<u>Total</u>
1967. 4	1,479	-	1,479
5	3,794	234	4,028
6	3,218	789	4,007
7	5,374	1,961	7,335
8	4,434	1,858	6,292
9	3,407	2,323	5,730
10	3,014	7,442	10,456
11	3,832	21,354	25,186
12	2,964	13,425	16,389
1968. 1	465	20,050	20,515
2	1,640	11,174	12,814
2	2,613	9,870	12,483
4	3,334	5,107	8,441
5	-	3,010	3,010
6	-	699	699
<u>Total</u>	<u>39,568</u>	<u>100,296</u>	<u>139,864</u>

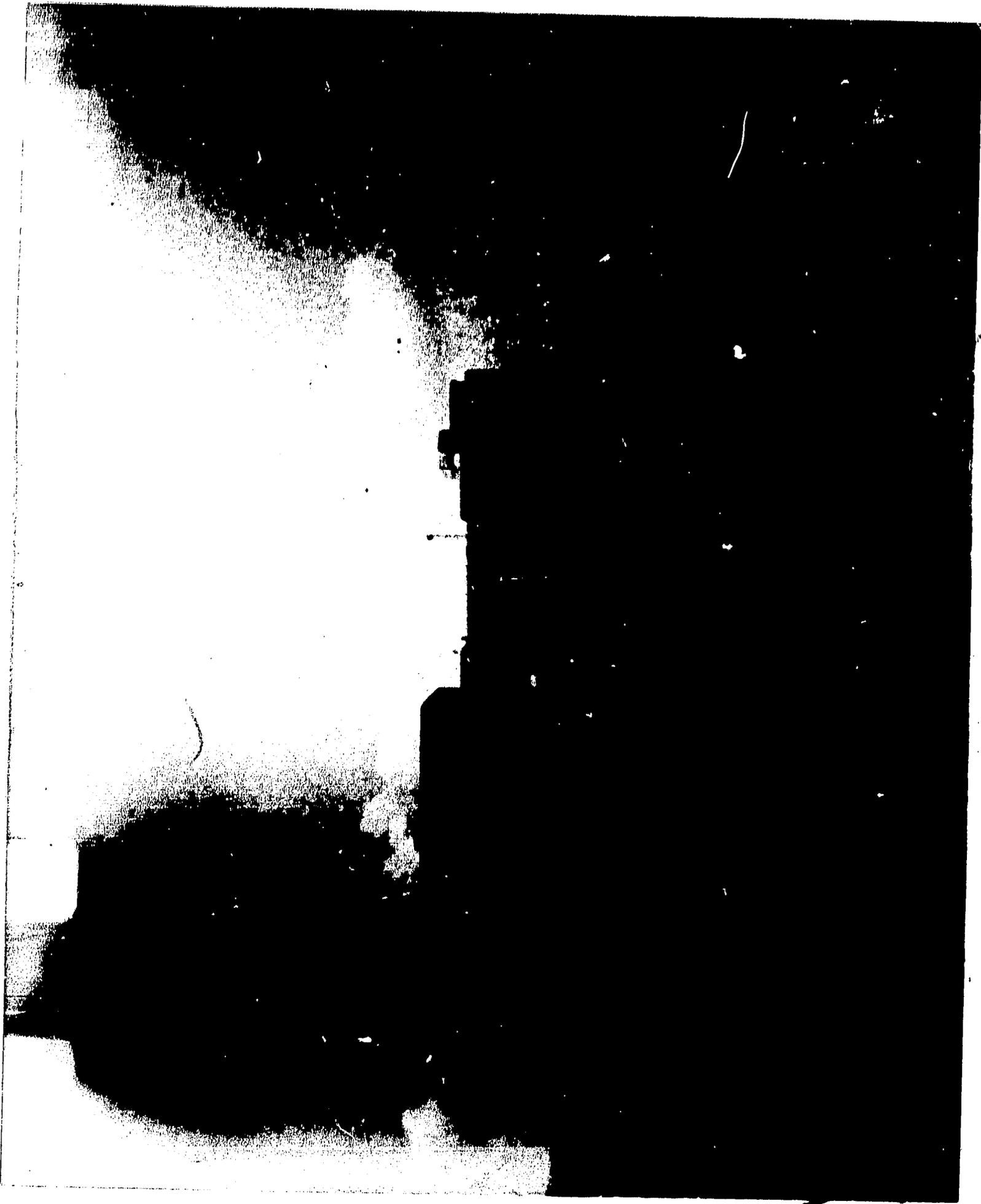
VI. PROCUREMENT ACTIVITIES

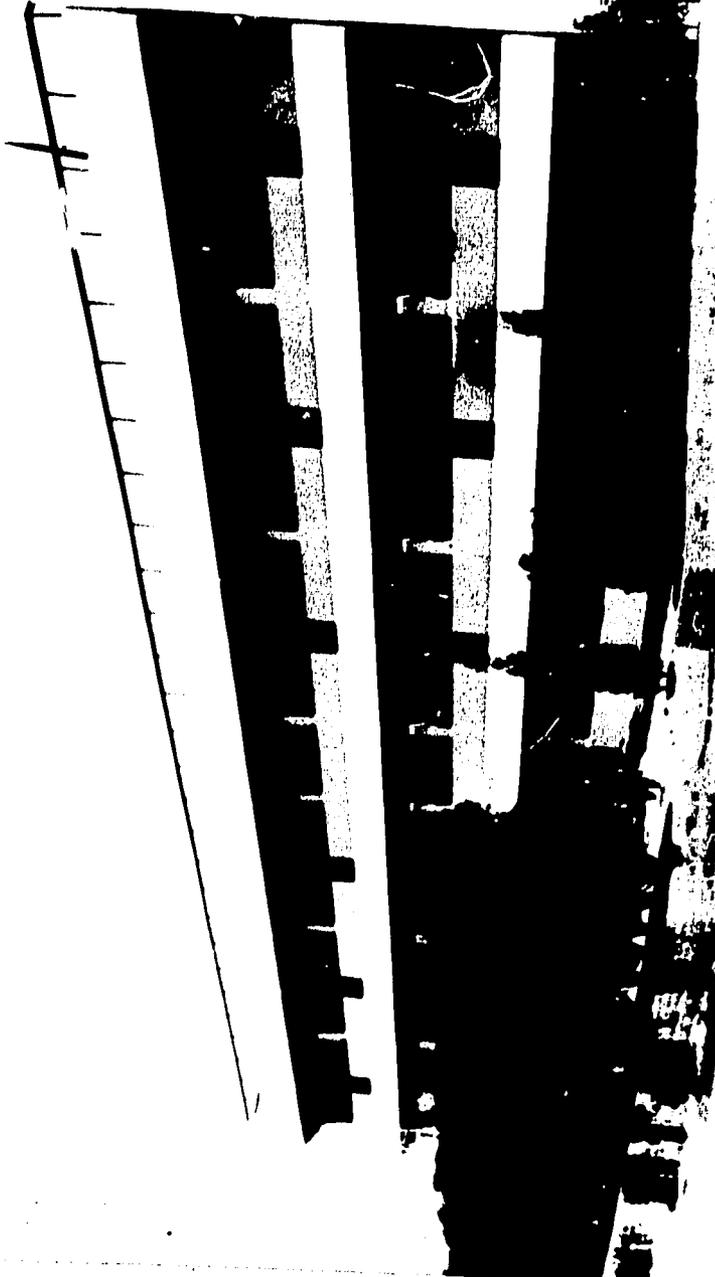
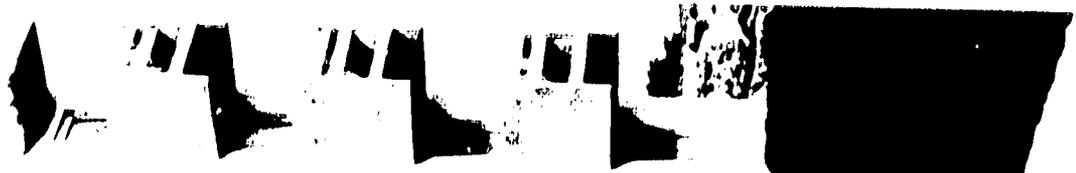
In accordance with the Fixed Price Contract made between Kolon and Chemtex, Chemtex was assigned to procure all the equipments and materials for expansion project and to ship them for Korea. Chemtex performed the above activities with efficiency.

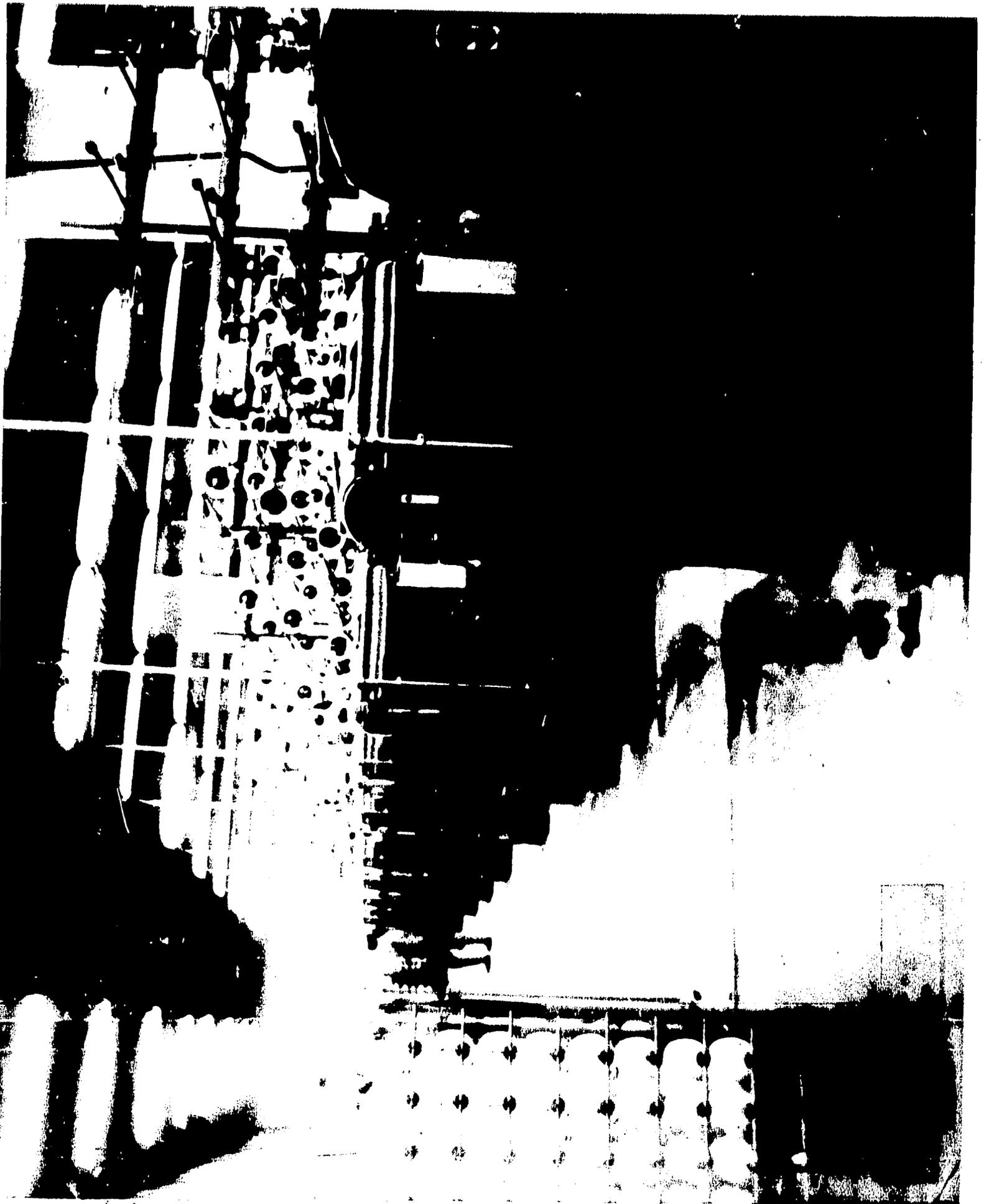
The indicating instrument (Chemtex Order No. CT 132-75) was the first cargo which arrived here on August 5th 1967 under L/C for our expansion project.

For your reference, following table shows the loan equipment and materials delivered to our job site.

<u>Month & Year</u>	<u>Amount (\$)</u>
August 1967	107,867.56
September 1967	301,509.48
October 1967	817,250.99
November 1967	1,451,679.90
December 1967	1,125,545.18
January 1968	1,145,401.35
February 1968	528,012.26
March 1968	82,245.00
April 1968	45,081.69
May 1968	14,883.23
June 1968	102,208.77
July 1968	28,881.08
<u>Total</u>	<u>5,750,566.49</u>







17'

