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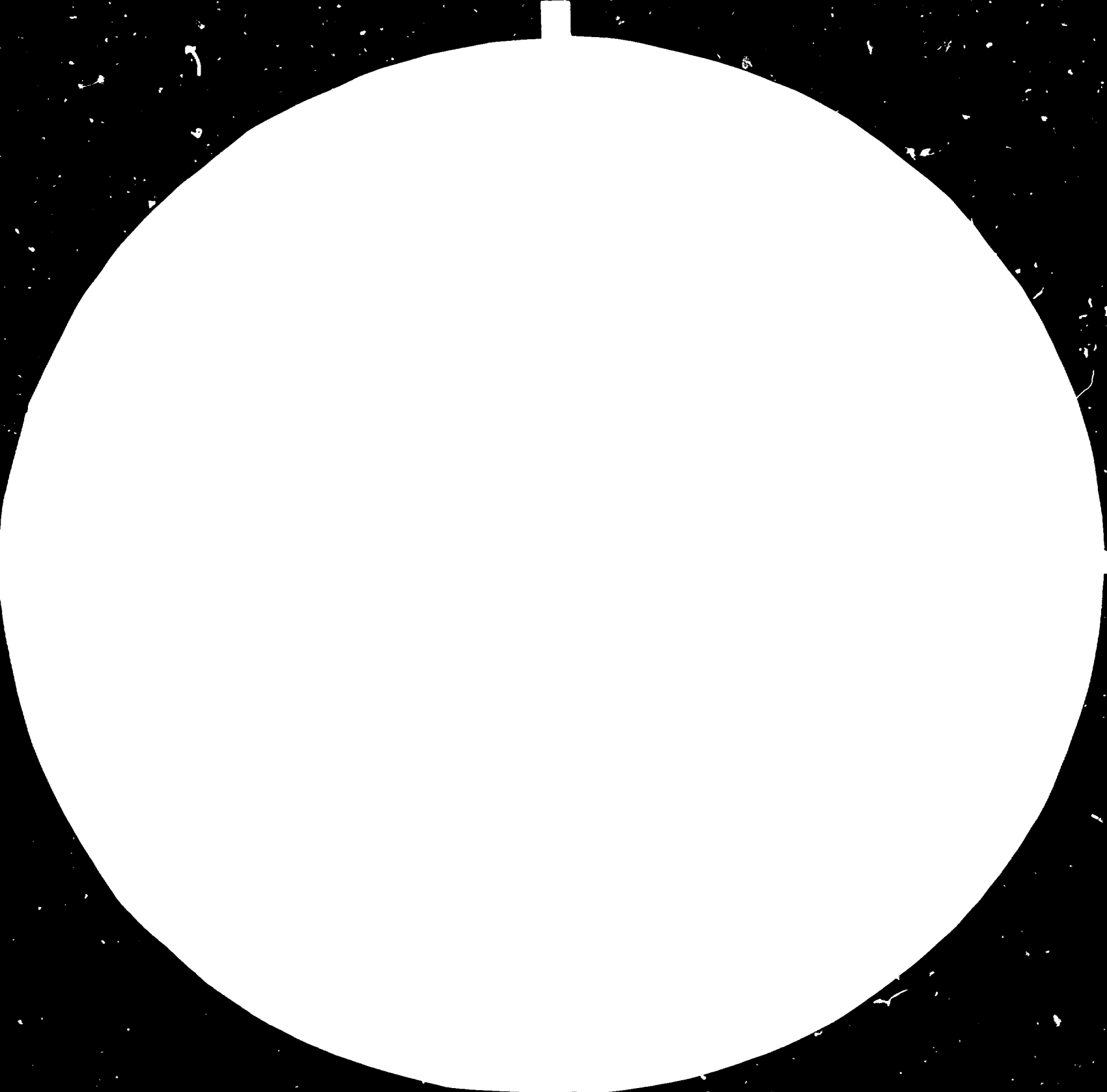
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2.8 2.5



MICROSCOPE RESOLUTION TEST CHART

NATIONAL BUREAU OF STANDARDS-1963-A
CONTRACT NO. 7-62-CO-5710
GPO : 1963 O - 571-000

13787

28. May 1984
ENGLISH

Vietnam.

LABORATORY CHEMICALS.

/VIE/80/029/10-01/32.1.H

SOCIALISTIC REPUBLIC OF VIET NAM

Final report

Prepared for the Government of SEV by the United Nations
Industrial Development Organisation, Executing Agency
for the United Nation Development Programme

Based on the work of Jan Palka, expert in chemical industry

United Nations Industrial Development Organization

V i e n n a

INTRODUCTION

I arrived to Hanoi airport midday at the 26-th of April. I was welcomed by a delegation conducted by Mr. Tran The Tinh, deputy director of the Drug Quality Control Institute /DQCI/, there were also Mr. Triong Van Quac from the International Cooperative Section of General Department of Chemistry /GDC/ and Mr. Tran Viet from the Duc Giang Chemical Works /DGCW/. I was accomodated in hotel Thong Nhat in the middle of the town.

At the some day, I visited Mr. Mathew Kahane, Deputy Resident Representative of UNDP in Hanoi. It was desided that we should meet the representants of Vietnam Government next morning.

The meeting next day was conducted by Mr. Nguyen Huu Thien, the chief of the International Cooperative Section of GDC. I became aquainted with my future collaborators and with the problems of the project and we prepared together a preliminary working plan for next few days.

I visited the Duc Giang Chemical Works /DGCW/ at the 28-th of April and the Drug Quality Control Institute /DQCI/ as well as the UNDP office at the 30-th of April. I accepted some necessary informations about my next work in Hanoi from Mr. Kahane and Ms Joana Merlin /Assistant Resident Representative/. Afternoon of April 30-th as well as May the 1-st are official holidays, that is why I started my work in the factory at the 2-nd of May. Meeting of both participating Ministries /Ministry of Health and General Department of Chemistry/ and the Department State Committee for Economic Relations with Foreign Countries /Head of Department is Mr. Vu Tei Boi/ with the presence of UNDP took place on the General Department of Chemistry at the 3-rd of May. Mr. Boi decided to make two separate projects because of the management of two different Ministries: Duc Giang Chemical Works

belong to General Department of Chemistry and the Drug Quality Control Institute to Ministry of Health. In connection with that Mr. Boi asked Mr. Kahane to prolong my stay in Hanoi.

I worked in Drug Quality Control Institute on second project from May the 7-th till May the 11-th. I consulted standly with the designed people and UNDP office during my work on both projects.

I finished the manuscript of both projects next week and then I consulted the definitive text with the Government and I helped the specialists of General Department of Chemistry to prepare the project for Preparatory Assistance Document of themes according to advise of Mr. Sokolenko from UNIDO Headquartes in Vienna.

I accepted a letter from Mr. Gumen dated in Vienna on April the 19-th at May the 17-th, in which is written: "In addition to carrying out the duties of the job description Mr. Palka was asked, if possible, to observe the situation of all chemical industry in the country and, therefore, to investigate new areas of co-operation in the field of chemical industry between UNIDO/Vietnam".

The General Department of Chemistry prepared 6 drafts of Preparatory Assistance Documents under my leading. The themes are:

- 1 - pesticides
- 2 - fertilizers
- 3 - synthetic fibres
- 4 - tissues from synthetic fibres
- 5 - chemistry of acetylene
- 6 - paints and varnishes

Government Committee approved both draft projects on May the 17-th. The list of participants is given in Appendix II.

I GENERAL EVALUATION OF CHEMICAL INDUSTRY

Chemical industry of Socialist Republic of Vietnam has next characteristic features:

- rather small capacities
- oldfashioned equipments
- primitive manufacturing processes
- uneconomical production with large consumption of raw materials and energies
- too many people engaged in the manufacture
- bad relationship between the number of workers in the chemical manufacture and in the maintenance /4 - 6 instead of 1 - 2/
- the organization of factories is mostly bad arranged /see organogram of Chemical Works Dug Giang/
- there is quite a great number of graduated employees, but many of them work monotonously /dosing of material for fixenals/
- special equipment /laboratory, control/ is rather badly utilized and often is even not installed because of unsuitable room e.g.
- work safety is rather unknown notion
- electrical installation is unsuitable because of the lack of spare parts
- there is a lack of state standards, e.g. for material sampling and operations
- there is lack of systematic growth of chemical industry in the whole country /new units have a majority of above mentioned disadvantages, too/

Details are described in both proposal projects in the chapter D Background and Justification.

II PROJECTS

The most important features of the both projects are:

A - Project for Duc Giang Chemical Works

- a/ the greatest attention is paid to the external assistance in the factory
- b/ new equipment is proposed for two most important units which will improve the quality of the production and increase its capacity:
 - production of inorganic salts by recrystallization
 - organic solvent's distillation
- c/ chosen capacity would be large enough for the needs of country and the equipment would be completed with suppliers guarantee

B - Project for Drug Quality Control Institute

- a/ the greatest accent is done at the training of the staff abroad
- b/ equipment is proposed for complementation of existing units
- c/ the capacities would not be of industrial scale /laboratory or pilot plant scales/

The mission of UNIDO recommends the Vietnam Government to appoint the Duc Giang Chemical Works to be responsible for supply of all laboratory chemicals in the whole country. This single responsibility will facilitate the control of needs in the branch, but this process would not be simple as it seems. The installation of LACHEMA in CSSR and gradual growth into a well known corporation could serve as a model for Duc Giang, too.

III ACKNOWLEDGEMENT

I should like to thank the Head of the International Co-operative Section of General Department of Chemistry Mr. Nguyen Huu Thien as well as to Deputy Minister of Health Mr. Nguyen Van Dan, to both director of Chemical Works Duc Giang Mr. Khai and director of Drug Quality Control Institute Mr. Khac, to his deputy director Mr. Thin, and to my direct collaborators Mr. Viet and Mrs. Sung. My thanks belong also to all Vietnamese people I met for their kindness and hospitality. Last but not least I thank the members of UNIDO Chemical Industrial Branch in Vienna and the members of UNDP office in Hanoi for their help.

APPENDIX I

Professionals participated in meetings and discussions

- Mr. Vu Tat BOI: Head of Department State Commission for Economic Relations with Foreign Countries
- Mr. Nguyen Huu THIEN: Chief of the International Cooperative Section, General Department of Chemistry
- Mr. Truong Van QUAC, Mr. Nguyen Duy TAN, Mr. Nguyen Canh KHUE: specialists of General Department of Chemistry
- Mr. Nguyen Quang KHAI: director of Duc Giang Chemical Works
- Mr. Tran VIET: Head of Research Section of DGCW
- Mr. Hoang Anh NYOC: Head of Technical Development Section DG
- Mr. Nguyen Van Dan: Deputy Minister, Ministry of Health
- Mr. Doan Huy KHAC: Director of Drug Quality Control Institute
- Mr. Tran The TINH: Deputy Director of DQCI
- Mrs. Tran Thie Le SUNG: Head of Section of Pilot Plant of D QCI
- Mr. Do Quy DIEM: Head of Section for Standardisation, Metrology and Physics
- Mr. Matthew KAHANE: UNDP Deputy Resident Representative
- Ms. Joana MERLIN: UNDP Assistant Resident Representative

APPENDIX II

Commission of Government for approving the projects

Mr. Dinh Trung DINH: State Commission of Science and Technology

Mr. Tran Van TU: Deputy Director of Technology Department,
General Department of Chemistry

Mr. Tran HIEU: Deputy Director of Planning Department, General Department of Chemistry

Mr. Nguyen Huu THIEN: Director of International Relation Department, General Department of Chemistry

Mr. Nguyen Dang DUONG: Specialist, International Relation Dpt.

Mr. Nguyen Duy TAN: Specialist, Planning Department

Mr. Vu Ngoi KY: Specialist, Capital Construction Department

Mr. Nguyen Quyng KHAI: Director, Duc Giang Chemical Works

Mr. Tran VIET: Chief of Technology Section, Duc Giang Chem. W.

Mr. Nguyen ANH: Specialist, Planning Department, Ministry of Health

Mr. Doan Huy KHAC: Director, Drug Quality Control Institute

Mrs. Tran Thie Le SUNG: Chief of Production Section, DQCI

