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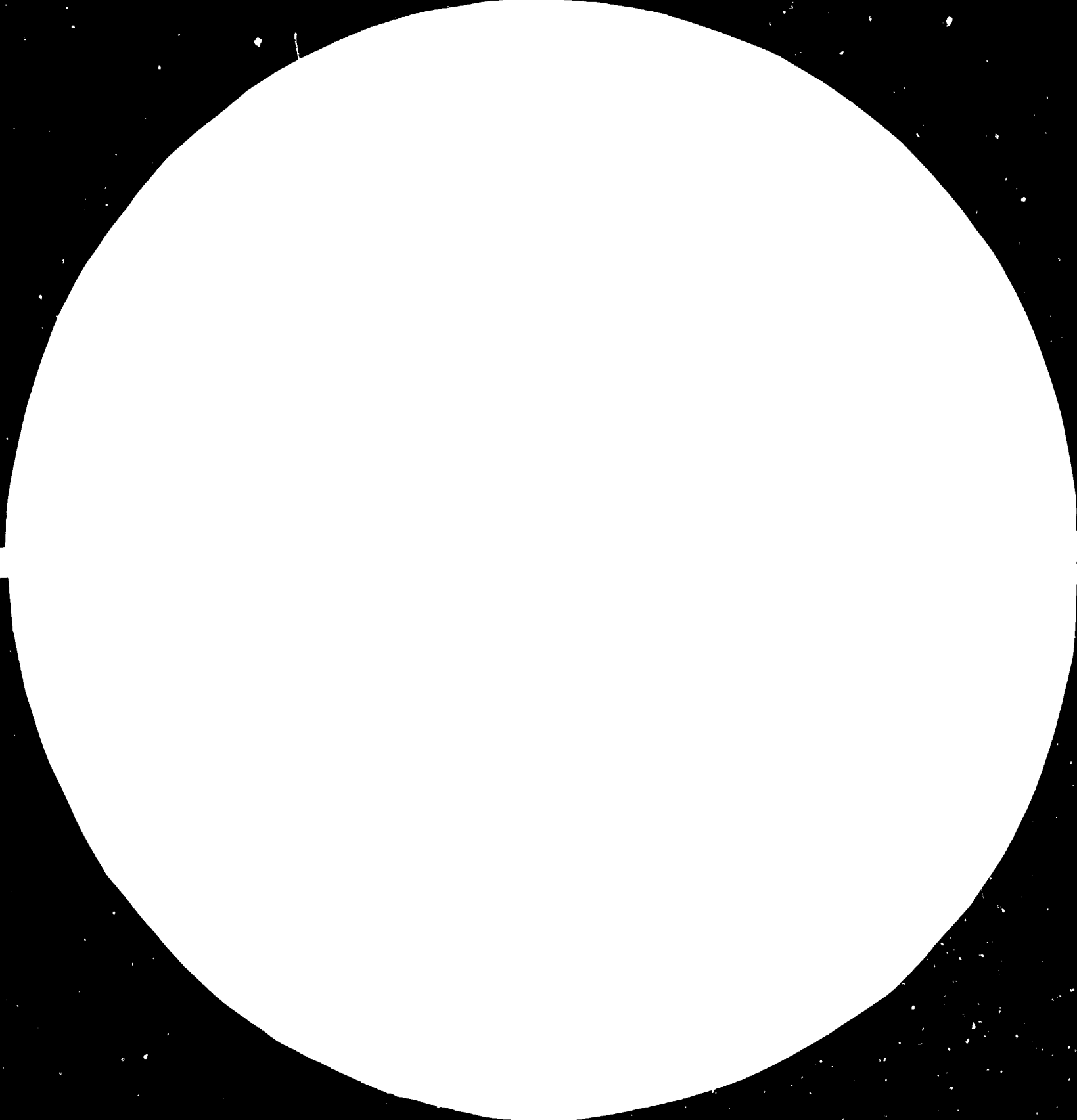
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MICROCOPY RESOLUTION TEST CHART

NATIONAL BUREAU OF STANDARDS-1963-A

A C N A , Milan

13031

Egypt.

Industrial Capacity Utilization, Rehabilitation of the VAT
Dyestuff Plant (ISMADYE).

TERMINAL REPORT
OF
ACNA PERFORMANCES

(UNIDO-ACNA CONTRACT 80/123 PROJECT NR DP/EGY/77/005
ITEM 2.09 c PAGE 7)

Milan July 24, 1983

201

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1. CONCLUSION

According to paragraf 2.04 of the contract and to amendment N.2, the activities of ACNA specialist in Kafr El Dawar are concluded on 1st August 1983.

The results reached in the production field can be considered positively both as quality and as specific efficiency.

Also the quantities obtained, especially during the periods with good availability of raw materials, have resulted satisfactory.

The initial forecasts have been after-wards modified considering the commercial circumstances and the availability of raw materials.

The specific consumption of raw materials and auxiliaries have decreased although using raw materials out of specifications already present at Ismadye store.

The production during assistance of ACNA specialists has become remarkably larger than the previous periods.

Other information and details are indicated in the interim report for the first six months.

2. PRODUCTION

2.1. RESULTS

The results of production of press-cakes is reported in the following table.

PRODUCT	UNIT from	PRODUCTION 1-1-82 to 1-6-83 (*)	N ^o OF BATCHES	Max Product Nbatches mo
Indanthrone	2	8058	52	16
Blue BC	1	18440	25,25	6
Dibenzanth.	55	12489	45	14
Dihydroxyd.	8	13536	110	20
Dimethoxy .	51	66429	64	12
IBEN. 5AMI.	53	1746	17	8
DIANTH. BROWN	52	5650	24	11
BROWN FR	12	11864	19	6
BIANTHRIM. OLIVE	52	7818	21	14
DADA	15/16	8255	24	9
DEDA	52	10030	32	12
OLIVE FR	12	4618	8	6
INT. YELLOW GCN	57	9444	28	6
YELLOW GCN	15	20699	38,5	9
DIBEN. NAFT.	13	19364	87	15
" Pur.	59	7179	32,5	9
GOLDENYELLOW RK	14	12472	26	8
THIOGLYC.	20	12970	61,5	10
PINK FR	20	10801	125	21
TRIANTR. BR	52	10900	32	15
BROWN BR	58	23365	100	12

SECTION 1

CHCS	Max Production Nbatches month	Average yield Batches	Yield Of Original ACNA Project	Yield of Protocol
	16	155	159	159
,25	6	730	926	926
	14	278	279	279
	20	123	128	150
	12	1037	1186	184
	8	102	94	94
	11	235	242	256
	6	624	594	611
	14	372	380	384
	9	344	350	380
	12	313	315	325
	6	577	588	600
	6	337	360	370
,5	9	537	650	657
7	15	222,5	225	234
,5	9	221	221	232
	8	479	470	470
,5	10	210	251	220
	21	86	84	118
	15	340	352	340
	12	234	255	255

James J. ...

L-8-23 safe ...

E. ...

SECTION 2

(*)

The July productions are not included in the precedent table because the final data came out later.

In any case the charges carried out in this month are the following:

UNIT 1	BLUE BC	N° 2 batches	(1)
UNIT 8	DIYDROX.	N° 6 "	(2)
UNIT 12	OLIVE FR	N° 6 "	
UNIT 51	DIMETOX.	N° 6 "	(3)
UNIT 52	DBDA	N° 8	
UNIT 55	DIBENZANTH.	N° 10 "	

- - -

- (1) stopped for no availability of indanthrone
- (2) maintenance of bubbling pipe of reduction kettle
- (3) shortage of dihydroxydibenzanthrone

2.2. SUGGESTION, REMARKS AND QUALITY FOR EACH PRODUCT

Unit 2. Indanthrone

The production started with 2-amino-aq. from 2-chloroaq. at 85% purity instead of 96% of 2-amino from 2-solfonicaq.

At the end some batches with 2-amino aq. purity 96% were made.

The quality and the yield were clearly improved.

They could have been improved more by taking care in filtering cloth of FPI filter press.

Unit 1. Blue BC

The average yield is lower but considering that the tinctorial strenght of the Ismadye Standard Type is stronger of 10%, the average yield will be 803 Kg/batches using Indanthrone coming from 2-aminoaq. 96% of purity.

The last batches of Bleu BC, exactly batches N° 196-197-198-199 for a total Kg 3303, are of quality good and with average yield of 827 Kg/batches, + 10 % of difference between ACNA and Ismadye standard. The average is kg 909, as 100%, against 926 Kg of project.

It is advisable to continue the production using 2-aminoaq. 96%, take care of FV1 vacuum filter (the tiles are assembled badly), any leakage decreases the yield and align the standard of Ismadye with ACNA to get the same tinctorial strenght. Now the increase above mentioned of 10% in the tinctorial strenght is under study.

Unit 55. Dibenzanthronyl

The quality of certain batches is lower due to untimeliness during the batches discharge.

It is necessary to respect strictly during the reaction the temperature and time to get the constant quality.

Unit 8. Dihydroxydibenzanthrone

The yield slightly lower is due to certain batches of Dibenzanthronyl at lower purity.

Unit 51. Dimethoxydibenzanthrone

See previous item. Some batches are lower yield due to using Dimethylsulphate out of specification and also the fact that the process is changed by transforming in finishing the Dimethoxydibenzanthrone to Green FFB directly.

Unit 53. I Benzoylamino-5-Amino-Aq.

The production can't be done in full capacity because the pressure filter FP 1 broke several times due to bad assembly of filter tiles.

Unit 57. Int. Yellow GCN

The production can't be done at full capacity because the situation of plant was in bad conditions and to get quality and quantity it needs a continue production without any stop. The stops were due to leak of nitrogen, steam and Benzothrichloride, apart the numerous stops due to maintenance (mainly leakage of jaketed pipes).

Unit 15. Yellow GCN

The lower yield is due to some batches of intermediate made by using bad Benzothrichloride.

It is advisable to keep Benzothrichloride in good drums and handle it with care to avoid cracks that will extend the corrosion and decompose the Benzothrichloride by the air moisture.

Unit 20.Thioglycolic Acid for Pink FR

The lower yield is due to high room temperature that decomposes the Thiocompound due also to brine temperature generally high and not sufficient to cooling. To decrease that decomposition is advisable to keep the Thiocompound the minimum time possible in the vacuum filter FVI and convert it at once into Thioglycolic acid.

Regarding the unit and products not mentioned above, the manufacture has been carried out without appreciable troubles.

Further information and details for each unit and product are available in the "Interim report on performance of ACNA's production manager" concerning the first six months of activities (s. paragraph 2.2. pag. 3).

The supply of raw material to plant must be done by paletts and delivery inside of plant in order to protect from sun in Summer and from rain in Winter (bromine bottles, etc.).

The planning office must be sure of supply of raw material to plant to avoid delay in production and also must give the priority to maintenance works. The maintenance must organize to get good cooperation between the different departments especially plastic, lead and mechanical workshop.

In order to obtain a more regular production, ACNA specialists point out that the evaluation of press-cake characteristics must be done by an independent laboratory also in order to avoid mistakes in the yield evaluation of each production department.

3. MAINTENANCE

Generally, the lack of maintenance caused many inconveniences during the production.

Really, the efficiency of the maintenance is increased but is still not sufficient to cover the higher production efficiency reached. The cause of lower performance of maintenance is essentially due to local conditions (supply of spare parts, tools, workers experience, etc.) even if the goodwill of workers and advices of ACNA specialists (oral and written, besides forty memos (')) permitted to the production to go on with acceptable efficiency and without personal accidents.

(') Notifications generally delivered from ACNA team leader holding advices, remarks and operating rules.

Also in this report many advices are indicated as follows:

- The Nitrogen pressure must be constant and the supply must be continuous.

Every interruption can be dangerous because the not returned valve after the supply valve is not installed and these conditions can provoke the mixing of different chemicals.

- Also the fluctuations of pressure, especially in the pressure filters FP, can damage the filter tiles if it is high, or choke the filter tiles if it is low, because impurity would cristalize and have to be removed at once (f. example, intermediate for Yellow GCN; in this case also the quality of product is suffering).

- The electrical power must be ensured at least for some units, especially unit 13 and 14 where the reaction cannot stop otherwise it can spoil the kettle of glassline and the batch.

- The steam supply must be ensured at constant pressure without variation and without condense that can provoke unbalance of temperature especially during steam distillation.
- All the lifts must be revised and be in working and safety condition (the door must be closed).
- The maintenance must organize a team to do a preventive maintenance according to the suggestion given by our maintenance manager. Maintenance should be organized in order to know the prices of different products, the same must be done for analisis and any other expense.

4. FINISHING

4.1. RESULTS

The quantities of each dyestuff product with the assistance of ACNA finishing specialist are indicated in the following table (period: from January 1982 to July 1983).

Dyestuff	N° of batch	Kg put	Kg disch.	Conver. factor	Kg as 100% obtained
ROMANT. YELLOW GCN U.D. 100%	8	10,506	10,035	1.04	10,035
▪ ▪ GCN eq.ost 40%	7	8,703	21,807	0.40	8,722
▪ ▪ FRK eq. U.D.	6	6,894	6,626	1.04	6,626
▪ ▪ FRK eq.NF 33%	4	5,600	16,980	0.33	5,600
▪ BRILL.PINK FR U.D. 100%	6	6,894	6,626	1.04	6,626
▪ ▪ FR pst 33%	6	5,788	17,540	0.33	5,788
▪ BLUE FBC U.D. 100%	18	25,922	24,675	1.04	24,875
▪ BRILL. GREEN FFB U.D. 350%	5	19,691	5,293	3.70	18,525
▪ ▪ FFB U.D. 300%	5	17,727	5,527	3.2	16,581
▪ ▪ FFB eq.NF.130%	6	29,965	22,476	1.33	29,219
▪ OLIVE GREEN FB U.D. 100%	4	4,771	4,621	1.03	4,621
▪ BROWN FBR U.D. 100%	16	22,332	20,730	1.06	20,730
▪ OLIVE FR U.D. 100%	4	5,895	5,643	1.04	5,643
▪ BROWN FR U.D. 100%	2	10,035	9,546	1.05	9,546
T O T A L	103	180,723	178,325	1,043 (*)	173,137

(*) This factor, average total, is slightly better than that of ACNA (1.05).

4.2. ADVICES ON THE PROCESS AND FORMULATION

During stay of ACNA specialist the milling time decreased more than 30% by correct use of Sand Mill and the instructions delivered by ACNA.

The Finishing Workers have learned the correct conduction of this operation.

The Ismadye production is actually equivalent at normal ACNA production in terms of dispersion quality.

From point of view of standardization (Nuance) the situation is not as much good.

Really until now this operation is not made also because it is not clear who has to do it. The advise of ACNA is as follows: the standardization is composed of twoparts.

The first part, more raw must be done during Finishing (or in the charge, or in the milling); the second part, more accurate, in the mixer keeping into account the evaluations of the control quality laboratory.

The normal shading materials are not always available but they are known in Ismadye.

The laboratory quality control besides the normal dispersion test must enlarge his job, and carry out trials and analysis in order to get, batch to batch, the right standardization formulation.

For many dyestuff and considering the normal quality of Ismadye production, ACNA specialists suggested the formulation to get the right product.

These advices are already used in the actual production.

5. COMMERCIAL AGREEMENT BETWEEN ISMADYE-ACNA

This agreement (dated 23th September 1980 between Ismadye and ACNA) concerns the purchase by ACNA of 50 Tons. of Ismadye products. Until now, ACNA bought only 4,5 Tons.

The ACNA actual situation obstructs the goodwill of ACNA to buy any more.

In any case, ACNA proposed to buy, quickly, another 23 tons. The relative negotiations are in course of definition.

Meanwhile one other company of Montedison Group started a commercial business relation with Ismadye.

6. NOTE

According to meeting held in Kafr El Dawaar in January 1982 (see Memorandum N° I already in the UNIDO hands in Vienna), ACNA have been informed about the activities periodically (every two weeks) by telex signed from:

Mr. L. Katthab and Mr. E. Tagliabue

All work documentation not sent to UNIDO (tlx, memos, reports, etc.) can be find in Ismadye or in ACNA.

AG/gmr



