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INFORMATION REPORT

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SECURITY INFORMATION

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1. On 11 May 1951, the physics section of the East German Central Office for Research and Technology (ZAFT, Berlin O17, Koepenicker Strasse 80-82) Prof. Dipl. Ing. Josef Stanek. asked Stanek (the head of Scientific Technical Office No. 4 = EFEM = Development and Production of Electrical Measuring Instruments = NTB-4 of SAG Kabel) to effect coordination in the field of development of electrical measuring instruments throughout East Germany.

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2. a. On 29 August 1952, after more than a year agreement had been reached in principle on the development of a standard East German series of panel instruments (Schalttafelinstrumente). Prof. Stanek stated his ideas on the standard sizes and measuring ranges of a variety of instruments. These ideas had been reached after discussion with a number of other experts in the fields concerned. Briefly, his ideas were that standardization on these values should be reached:

(1) Moving coil meters

Accuracy: the meters must satisfy the demands of accuracy class 1.5, but must be so built that they will also satisfy the demands of 0.5 (sic).

Housings: 40/50 mm ϕ , 50/63 mm ϕ , 65/83 mm ϕ , 80/100 mm ϕ , 110/130 mm ϕ , 168/188 mm ϕ , 72 x 72 mm², 144 x 144 mm², 144 x 72 mm².

Range: for housings of 80/100 mm ϕ or smaller: lower current limit = 50 μ A, lower voltage limit = 15 mV. For housings of 110/130 mm ϕ and larger, corresponding values of 400 μ A and 40 mV.

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(2) Moving magnet instruments

Accuracy: 1.5

Housings: 40/50 mm ϕ , 50/63 mm ϕ , 65/83 mm ϕ .Range: Lower: 1 mA and 60 mV
Upper: 6, 10 or 25 A, according to size.
600 V.(3) Rectifying instruments

For measurements in the frequency range of 50-20,000 cps.

Range: 1 - 150 mA.
1 - 600 V.(4) Thermo-couple instruments

For measurements in the range 100 kcs - 50 mcs and around 500A.

No further recommendations.

(5) Electromagnetic instruments (Dreheiseninstrumente)

Accuracy: 1.5

Housings: As for moving coil meters, with the omission of the first value (40/50 mm ϕ).Range: Lower: 100 mA. 10V.
Upper: 100 A. 600V.(6) Power meters

Accuracy: 1.5, but so built that they can be used for constructing portable instruments of class 0.5 or 1.0.

Housings: 110/130 mm ϕ , 168/188 mm ϕ , 144 x 144 mm².

Range: Current path of the measuring apparatus: 0.1 - 6A. For the voltage path of the measuring apparatus, a current supply of 10 mA.

(7) Direct reading frequency meters

No recommendations.

(8) Vibrating reed frequency metersHousings: 110/130 mm ϕ , 168/188 mm ϕ , 144 x 144 mm², 144 x 72 mm².(9) Phase meters and synchronoscopesHousings: 168/188 mm ϕ , 144 x 144 mm².

b. Prof. Stanek further recommended expenditures on:

- (1) development of bearings from raw materials available in East Germany. Hitherto, measuring instruments had had bearings of agate, spinel, and sapphire; these materials were rarely mined in East Germany, and foreign currency had to be spent to procure them.
- (2) development of magnets from materials available in East Germany.
- (3) development of metalized resistors (Schichtwiderstaende) to replace wire resistors in voltmeters.

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(4) development of standard housings.

3. a. A Coordinating Committee for Electrical Measuring Instruments was formed some time in 1952 and held an important meeting on 1 September 1952 to discuss the matters raised by Prof. Stanek [redacted] 29 August 1952 to ZAFT.

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b. Present at this meeting were:

Dip.-Ing. Georg Chrapek	}	ZAFT
Ing. Schenke		Ministry of Machine Construction
Prof. Dipl.-Ing. Hoschke	}	VEB Geratowerk Chemnitz (GC)
Dr.-Ing. Mau		Elektro-Apparate-Werk
Dr. Roeseler		Treptow (EAT)
Obering. Pietzsch		EFEM (NTB-4)
Dipl.-Ing. Josef Stanek		

c. The meeting decided that there were only three works in East Germany able to deal with ZAFT's wishes on the development of a standard series of panel measuring instruments. They were the Chemnitz plant (GC), the Treptow plant (EAT), and EFEM (NTB-4). It was, therefore, decided to allot development tasks as follows:

- | | | |
|---|---|--------|
| (1) Moving coil meters | | |
| Small core magnet instruments | - | GC |
| Large " " " | - | EAT |
| (2) Moving magnet instruments | - | EFEM |
| (3) Small rectifying instruments | - | GC |
| Large " " | - | EAT |
| (4) High frequency current transformers | - | EFEM |
| (Chrapek here intervened to say that the development must provide for frequencies up to 200 mcs). | | |
| (5) Electromagnetic instruments | } | - EFEM |
| (6) Power meters | | |
| (7) Vibrating reed frequency meters | } | - EAT |
| (8) Phase meters and synchronoscopes | | |
| (9) Bearings problems | } | - EFEM |
| (10) Magnet problems | | |
| (11) Metalized resistors | | |
| (12) Housings | | |

Chrapek said, with reference to point (9), that Dralowidwerk Teltow was also working in this field, and it seemed pointless to have two places doing the same work. It must still be decided which place, Teltow or EFEM, should do the development work.

4. a. On 4 August 1953, there was a meeting of the East German Working Group on Electrical Measuring Instruments and Standards, held in EFEM. This group was part of the East German Working Party for Electrical Measuring and Testing Engineering. The working group appeared to be the direct descendant of the 1952 Coordinating Committee, and the minutes of the 1952 meeting (paragraph 3 above) were first read at the present meeting. That there had been no significant developments for a year appeared to be confirmed by Stanek, chairman of the working group, who said that "now, after one year, the State Planning Commission has just given permission - and so far only by telephone - for the start of the proposed work" (i.e., the production of a standard series of panel instruments).

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b. Present at the 1953 meeting were:

Prof. Hoschke	}	VEB Geraetewerk Chemnitz
Kaessler		
Bleyl		
Olbrich	}	Elektro-Apparatewerk J.W. Stalin, Treptow
Zacher		
Godehardt		Karl-Marx-Werk, Magdeburg-Buckau
Belwe		VEB Funkwerk Erfurt
Daehne		RFT Anlagenbau Leipzig
Sachade		" " Berlin
Neumann		Massgeraetewerk Quedlinburg
Groh		RFT Leipzig Zentrale Entwicklung
Dr. Rump		Deutsches Amt fuer Mass und Gewicht (East German Office for Weights and Standards)
Fietsch	}	EFEM
Riemann		
Rohrbach		
Stanek		

c. Decisions of the working group:

- (1) East German instruments will be developed: the various individual plant types will disappear.
- (2) Round housings have only a traditional value. They will give way to square and rectangular instruments. Users will be convinced of the need for this change by suitable articles in the technical press.
- (3) Housing size 96 x 96 mm will be included in the standard series.
- (4) EFEM will investigate the construction of housings from pressed materials.
- (5) The following 1954 development tasks of the Geraetewerk Chemnitz are accepted:

Skin temperature meter
 Panel instrument 96 x 96 mm
 Vibration galvanometer
 pH compensator
 Design of core magnet system for light beam apparatus
 Portable voltmeter - special apparatus for Ministry of Post and Telecommunications
 Core magnet measuring instrument

d. The next meeting was to be held on 15 September 1953.

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