

IFAC
INTERNATIONAL FEDERATION
OF AUTOMATIC CONTROL

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Note on Information Bulletin No. 6
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The Information Bulletin No. 6 is expected to be published in November 1959. Information to appear in this issue should therefore reach the Editor:

Professor Ing. Dr. Victor Broida
 Second Vice-President of IFAC
 15, rue de la France-Mutualiste
 Boulogne-sur-Seine (Seine) France

not later than October 15th, 1959.

Message from the President

The General Assembly of IFAC at Chicago in September of this year provides an excellent opportunity for automatic control engineers from all over the world to get together and extend the progress that IFAC has made since its founding in Paris two years ago. The Assembly will focus attention on the Technical Committees that have been established. It will also bring about the election of new officers and the introduction of a modified Constitution in keeping with the wishes of our member organizations.

Reports of plans and progress toward our First International Congress of IFAC at Moscow will be presented. These will reflect the high degrees of interest with which this event is being regarded in the automatic control world.

The September General Assembly will also serve to emphasize the technical and scientific aspects of IFAC. During the week following the Assembly, IFAC delegates and visitors will attend the technical sessions and exhibitions of the Instrument Society of America also being held in Chicago. Under the chairmanship of Professor Dr. G.J.D.M. Verhagen of Delft, Holland, nine speakers representing IFAC will present papers. In addition, IFAC representatives will see firsthand some of the latest American automatic control equipment and to discuss it with the many American engineers and scientists gathered for this meeting.

The formation of the IFAC Technical Committees, as recommended by the Advisory Committee at Rome in March of this year (see No. 4, p. 4 and 5 of the IFAC-Bulletin), points the way to more effective international technical activity and progress. With the more widespread knowledge of world-wide control activities, the time and money being spent on research and development can be made more effective. Reduced duplication of effort and a speedier rate of change of innovation should result.

For greater effectiveness to be made in the interchange of technical information, it is necessary that the IFAC committees be strong and active. Let me encourage each member organization of IFAC quickly to make its recommendations for individuals to become members of those committees it desires to participate in actively. Furthermore, each member organization should stimulate internally activity in as many of the areas of IFAC technical committee interest as is possible. In this way a broader awareness of the current state of the automatic control art will be more generally available.

Another way in which the work of IFAC can be more effective is for the member organizations to be more prompt in their communications with one another and with the IFAC Secretary. This will be especially necessary as we approach the Moscow Congress. I have been in-

creasingly favorably impressed with the speed of the airmail throughout the world. With such service available, we can greatly increase the speed of response of our information exchange if we act promptly in reply to our correspondence.

In closing let me encourage each of you to take advantage of the "Free Ideas, Opinions, and Suggestions" section of our Bulletin. This letters-to-the-editor feature is a way of presenting timely and pertinent information to a world audience of people expert in automatic control. Your ideas are most welcome and should help further the purpose of IFAC.

Harold Chestnut

The ISA-IFAC Symposium in Chicago

This Symposium, devoted to instruments and transducers and their application to automatic control, will be held, as already announced, in Chicago on Tuesday, September 22, 1959, under the joint auspices of the Instrument Society of America and of IFAC and under the presidency of Professor Dr. C.J.D.M. Verhagen of the Instrumentation Department, Technological University of Delft, Holland.

The nine following papers were scheduled for this Symposium:

- 1° - "The Ringtornductor - a torque-gauge without sliprings for industrial measurement and control" by Mr. Orvar Dahle (Sweden).
- 2° - "A pulsating gas flowmeter and its applications to flow control" by Prof. Dr. T. Isohe (Japan)
- 3° - "Some questions concerning the construction of magnetic instruments for gas analysis" by Mr. D.I. Ageikin (USSR)
- 4° - "Dynamic behaviour of instruments for gas analysis in connection with automatic control" by Dr. E. Lehner (Germany)
- 5° - "Force balance or motion balance in the design and applications of electronic differential pressure transmitters" by Dr. H. Kromüller, (Germany).
- 6° - "Application of hydraulic components to steel mills" by Mr. P. Blain (France).
- 7° - "Electronic generators of random processes for the simulation of fluctuations in automatic control" by Mr. M. Ulbrich (Czechoslovakia).
- 8° - "Developments in automatic data handling" by Messrs. C.A. Laws, F.F. Sutherby and D.W. Hobbs (United Kingdom).
- 9° - "Micro-inches in the workshop" by Mr. P. Bursson (France), read by Mr. J. Loeb.

WORLDWIDE AUTOMATIC CONTROL

Austria

The ÖAA (Österreichischer Arbeitsausschuss für Automatisierung - Austrian Committee for Automation) has celebrated on May 25, 1959, in Vienna its first year of activity. The programme of the General Assembly of the ÖAA called at the above date comprised the two following papers:

- "One year of the ÖAA" by Dr. Ing. Oburger.
- "Programming and Automation" by Prof. Dr. Ing. Harry Weissmann of the High Engineering School of Hannover.

On the days following this General Assembly, the ÖAA has organized the following events, amongst which visits of some strongly automatized Austrian works:

- On June 3 - a visit of a brick factory in Vösendorf.
- On June 17 - a visit of an enameled-metal factory in Vienna.
- On June 18 - a film projection on "Automation and Organization" with several German and American films on this subject.
- On June 24 - a visit to motor works in Kottlingbrunn engaged in mass production and having the reputation of being one of the most modern in Europe.

Belgium

AUTOMATIC CONTROL PROGRAMME FOR TECHNICAL AND ENGINEERING SCHOOLS

The IBRA (Institut Belge de Régulation et d'Automatisme - Belgian Institute of Automatic Control) has worked out a most interesting educational programme on Automatic Control for Technical and Engineering Schools. The programme was originated by the Educational Committee of IBRA, comprising several Belgian experts such as professor Peters (Chairman), of the University of Louvain, professor Crops, of the university of Gent, Mr. Maes, Rector of the High Institute for Technical Purposes of Zeebrug-Ostende, Mr. Allé, director of the Queen Astrid School of Mons, Messrs. Heuskin, Aynbinder etc., who approved it, on March 12, 1959; it was then approved by the Belgian Ministry of Education for general use in Belgium.

This educational programme visualizes three possible uses of Automatic Control personnel issued by Technical and Engineering Schools:

- 1 a) As future users of Process Control techniques in continuous processes
 - 1 b) As future users of Automation techniques in workshops.
 - 2) As future manufacturers of Automatic Control equipment.
- Moreover, this programme applies to three different levels of Graduates:

- 1) - Level A_3 (the lowest one) referring more specially to highly qualified workmanship.
- 2) - Level A_2 (medium) referring more specially to foremen, instrument men and junior or assistant engineers.
- 3) - Level A_1 (the highest one) referring more specially to senior engineers.

Whatever may be the particular application visualized for the future graduates or the level of their training, the programme stresses the necessity of basing the latter on a very broad previous knowledge of fundamental physics and of the classic branches of education.

The recommendations of the programme can be summed up in the following way, according to the future activities and the educational level of students:

1a) For Future Users of Process Control Techniques in continuous processes (such as chemical or metallurgical industries, power plants etc.)

Level A_3 (highly qualified workmanship)
This training, starting from the level of skilled mechanical or electrical workmen, would require a one-year specialization term. It should comprise the technological study of measuring and control instruments (pneumatic, hydraulic or simply mechanical and electrical for mechanical departments as well as electronic assembly and repair techniques for electronic departments). It should provide for a course on materials used for instrument construction as well as on techniques used for transforming these materials.

Level A_2 (medium)

Technical schools of the level should insist, in their general courses on physics and on electricity, on the knowledge of industrial measurements, the general principles of which should be illustrated by the main methods of measuring pressures, levels, flows, densities etc. Industrial drawing courses should also aim to familiarize students with schematic diagrams.

A one-year specialization term could be carried out under the form of evening lectures with the following programme:

1°.- A course on fundamental processes to be controlled (such as chemical or metallurgical processes, oil refining processes, heating and air conditioning etc.), the choice of which should suit local industrial needs. This course should answer the following questions:

- a) what are the basic features involved ?
- b) what are the critical magnitudes to be controlled ? (with some rough figures).
- c) what are the difficulties encountered ?

2°.- A course on methods of measuring these magnitudes.

3°.- A course on control methods and their features (on-off, proportional, proportional plus integral, proportional plus integral plus derivative etc.)

4°.- A course on transducers (pneumatic, hydraulic, electric and electronic).

5°.- A course on final elements (valves, motors etc.) with eventually, a complementary knowledge of electronics and of fluid mechanics for those who did not yet receive the necessary basic training in this respect.

6°.- An elementary course on assemblies of components.

7°.- A course on industrial drawing and on interpretation of schematic diagrams.

Level A_1 (senior engineers)

Just as for the level A_2 , it is necessary that the basic courses of the level A_1 take into consideration the industrial applications of the theories explained. It is therefore necessary that the above programme given for the level A_2 should be followed with, however, less stress on technological descriptions. Moreover, mathematical knowledge should be developed; this particular training should insist on the physical significance of mathematical results and comprise the following chapters:

- a) The Laplace transform and operational calculus (at least, in what their use and significance are concerned).
- b) Frequency response.
- c) Transient response.
- d) Stability criterions (at least, in what their use is concerned).
- e) Basic notions on control methods (proportional, proportional plus derivative, proportional plus derivative plus integral etc.)
- f) Elaboration of process equations.

1 b) For Future Users of Automation Techniques in Workshops (transfer, remote manipulation, positioning of parts etc.)

Level A_3 (highly qualified workmanship)

Training of workmanship able to build and to assemble components of an automatized or mechanized process. This requires an excellent

basic previous training and a good knowledge of metrology and of measuring instruments and, moreover, a complement of basic training mainly devoted to the technology of electric pneumatic and hydraulic instrumentation and that of the devices used.

Level A₂ (medium)

This training requires a previous training in mechanics or electricity. A specialization could be organized under the form of evening lectures comprising:

- 1° - A complement of mechanics for electrical engineers and a complement of electricity for mechanical engineers.
- 2° - A thorough course of applied cinematics and dynamics.
- 3° - An elementary course of fluid mechanics mainly devoted to oil and air features in hydraulic and pneumatic circuits.
- 4° - Design and calculation of main components - hydraulic, pneumatic, mechanical - used in the mechanismisation of workshops.
- 5° - Electric and electronic measuring and control instrumentation.
- 6° - Study of automatic machines from the construction standpoint.
- 7° - Study of manufacturing problems when using automatic machines.
- 8° - Design office and applications.

Level A₁ (senior engineers)

- 1) Cinematic and dynamic analysis of components should have here their place. The programme should also comprise the study of hydraulic and pneumatic circuits and components.
- 2) Study of electronics and electricity, with the exception of specific problems referring to telecommunications.
- 3) Technological study of classic and new construction materials from the standpoint of their practical features when used, of their utilization and of their machining.
- 4) Study of production problems and of manufacturing with the use of automatic machines.
- 5) An elementary course on servomechanism theory mainly devoted to the physical understanding of the control loop. It would also be useful to quote elements of logical circuit theory as long as they could be applied to the design of control and of safety circuits.
- 6) Principles of computers and methods of coding data and information; above all, the explanations should not be complicated by useless mathematical theories.

2) For Future Manufacturers of Automatic Control Equipment At this stage, the level A₂ (highly-qualified workmanship) should not be considered; computer operators should be directly trained in connection with computer manufacturers and be selected from personnel having previous general education.

Level A₂ (medium)

This training should be based on a good previous knowledge of electricity and electronics. It should comprise the study of elements of linear servomechanism theory and technological courses, covering elements of construction of circuits and industrial Automatic Control.

It would be useful to call the attention of students to the possibilities of non-electric, hydraulic and pneumatic, components. According to local industrial needs and to the extension to be given to this training, it could include a part of the programme on the level A₁ already mentioned in the previous chapters (a) and (b). This training should be carried out during one-year complementary term.

Level A₁ (senior engineers)

Only a limited number of engineering schools should devote themselves to this task.

This training should avoid any excessive specialization and convey to the students a solid basic knowledge of mathematics, mechanics, physics and chemistry apart of specialized courses.

As the design and construction of automatic devices is frequently associated with industrial electronics, this technical branch should be broadly developed.

The specialized courses should be divided in three classes:

- 1° - Theoretical courses: applied mathematics (operational calculus, Laplace transform), servomechanism theory, circuit theory, logical circuit theory.
 - 2° - Courses on applied automatics: electrical, thermal, mechanical applications and technology.
 - 3° - Courses on industrial electronics.
- As practice is absolutely necessary for a good training, a high proportion of laboratory and design work hours should be provided for.

SYMPOSIUM ON SYSTEMS ENGINEERING

This symposium will be held in Antwerp in October-November 1959 under the joint sponsorship of IBRA (Antwerp-section) and the Technological Institut of Antwerp.

EDUCATIONAL MATERIAL EXHIBITION

This exhibition will display devices built for educational purposes by professors of Automatic Control of several Belgian technical and engineering schools.

It will take place on November 7, 1959 in the State Technical High School of Anderlecht (a suburb of Brussels).

France

The 6th TIMS (The Institute of Management Sciences) Annual Meeting

This Annual Meeting will be held in Paris from September 7 to 10, 1959, and in Amsterdam on September 11. Amongst some 70 papers to be read, the following could be perhaps of interest to Automatic Control engineers:

- "Interplay of concepts and methods in some Graph Theory applications" by C. Berge and M. Verhulst (France)
- "A feedback theory approach to production and inventory control" by Salah Elmaghraby (USA)
- "The use of machine models in combination with man-machine simulation for developing and evaluating proposed organizational structures and policies in complex human organizations" by Murray A. Geisler (USA)
- "Optimizing manufacturing operations by means of computer simulation" by A.R. Marks (USA)
- "Logical analysis of the structures of firms" by M. Weylon (France)
- "Automatic data processing and management" by F.H. Raymond (France)
- "Survey on simulation" by P. Rosenstiehl and M. Simond (France)
- "On the analysis of structural properties of large-scale micro-economic input-output models" by Klaus Wenke (Germany)

All particulars can be obtained from:

6th Congrès International du TIMS
Conservatoire National des Arts et Métiers
Paris (30) / France

Germany

Meeting on Control in the Supply of Electrical Energy

The next conference of the VDI/VDE-Fachgruppe Regelungstechnik to be held on October 29 and 30, 1959 at Karlsruhe will be devoted to "Control in the Supply of Electrical Energy".

The papers will first treat the demands of the power stations regarding the solution of control problems, especially for the control of large districts. Other papers will deal with special methods of frequency and power control. Several papers will include the co-operation of thermal and hydraulic power stations. The last part of the papers is devoted to control of voltage and wattless output in connection with thermal and hydraulic power stations and transformers. Special papers will show the importance of the exciting speed of exciters as well as the measurement and formation of the characteristic curve of the voltage of synchronous generators and transformers.

Inquiries should be mailed to: VDI/VDE-Fachgruppe Regelungstechnik, Prinz-Georg-Str. 79, Düsseldorf, Germany.

Meeting on Automatic Production of medium Series

The VDI-Fachgruppe Betriebstechnik (ADB) (VDI Committee for Manufacturing Practice) will organize a meeting on October 22 and 23, 1959, at Stuttgart. The following topics will be dealt with:

1. - Basic conditions for the automatization in medium series production.
 - 1.1 Where to start with automatization
 - 1.2 Education of the engineers
 - 1.3 Relations between design and fabrication
2. - Feeding lines
 - 2.1 Statistical survey of pieces
 - 2.2 Selection of automatic feeding lines
 - 2.3 Chucking of the pieces
 - 2.4 Interlacing of machine tools
3. - Tools and machinery
 - 3.1 Machine units according to VDI 3270
 - 3.2 Standardization of units for machine tools
 - 3.3 Mechanical tool exchange for small series
 - 3.4 Planned tool exchange
4. - Regulation and supervision
 - 4.1 Trend of development
 - 4.2 Functional diagrams of machine tools
 - 4.3 Control of machine tools by micro-switches
 - 4.4 Signal apparatus for control devices
 - 4.5 Semi-conductors for control devices.

A small exhibition on automatization will be shown. Information given by: Verein Deutscher Ingenieure, Ausschuss Automatisierung in der Fertigung, Prinz-Georg-Str. 79 Düsseldorf, Germany.

Switzerland

Sixth Symposium of ASPA

The ASPA (Association Suisse pour l'Automatique - Swiss Association for Automatics) organizes its 6th Symposium in co-operation with the ASC (Association Suisse de Chimistes - Swiss Association of Chemists) and the MUBA (Mustermesse Basel - Sample Fair of Basel). This joint event will take place in Basel from November 10 to 15, 1959. The MUBA is in charge of an Exhibition, applications for which are to be sent to

Schweizer Mustermesse, Basel 21, Switzerland,

mentioning the title of the joint event, which is IIMAC (Internationale Fachmesse für Laboratoriums-Messtechnik und Automatik in der Chemie - International Fair of Laboratory and Measuring Techniques and Automation in Chemistry).

The ASC sponsors, on the opportunity of IIMAC, a Symposium held on November 10 and 11, 1959, and devoted to Laboratory and Measuring techniques.

As to the 6th Symposium of ASPA held, on the opportunity of IIMAC, on November 12, 13 and 14, 1959, it is devoted to Automatic Control and scheduled according to the following programme:

Thursday, November 12

Morning: "Fundamental viewpoints of a quantitative approach to automatic operation in industrial techniques and chemistry" by Prof. Ed. Gerecke, Zurich (Switzerland)

"Automatic energy control techniques" by Dr. B. Sturm, Leverkusen (Germany)

"Automation in preserves industries" by Mr. B. Junker, Basel, (Switzerland)

"Possibilities of automatization of small processes" by Dipl.-Ing. Etienne Schär, Basel (Switzerland)

"Modern components and systems for Process Control" by Dipl.-Ing. K. Seifert, Zurich (Switzerland)

Friday, November 13

Morning: "Possibilities and economy of automation in unity or small series production" by Dr. Ing. Helmut Schnewlin, Baden

"Economics and Automation in the Chemical Industry" by Mr. R. Knoblauch, Philadelphia (USA)

"Economic considerations in relationship with Automation" by Dr. J. Bosch, Eindhoven (Holland)

"Economic aspects of Automation in oil industry" by Mr. J. J. de Jong, Den Haag (Holland)

"The economics of automation, its application to simple and involved processes" by Mr. H. Hummerston, London (United Kingdom)

"Fundamental notion of Automatic Control and their links with economic data" by Mr. P. Willems, Charleroi (Belgium)

Saturday, November 14

Morning: "The aims of a Data Processing system in chemical industry" by Mr. M. Hafiter, Zurich (Switzerland)

"The electronic Data Processing serving banking" by Mr. E. Burgermeister, Zurich (Switzerland)

"Production planning with Data processing equipment" by Dr. W. Kaeslin, Zurich (Switzerland)

After-noon: "Optimization problems in the light of Data Processing" by Dr. Ernst F. Billeter, Erlbourg (Switzerland)

"The use of electronic computers by Government and public services" by Dr. F. Droeven, Emmenbrücke (Switzerland)

Simultaneous translation of all the above papers in German, French and English is available.

All further particulars can be obtained from:

The Secretary of IIMAC
Basel 21 / Switzerland
Telephone (061) 32 38 50.

United Kingdom

Visit to USSR of a British team to study Automatic Control in industry

On May 17, 1959, a British team of experts in Automatic Control left the United Kingdom for a visit, of a fortnight's duration, to USSR in order to study the developments and applications of automatic control techniques in industry.

This visit, arranged by the Institution of Electrical Engineers co-operating with the Soviet Relations Committee, on the one hand, and the Academy of Sciences of the USSR, on the other, had the following particular examples of interest:

1. - Machine tool control,
2. - Telemetering systems,
3. - The uses of digital computers or digital techniques in the control of processes or in the recording and analysis of data in process plants,
4. - Extremum controls.

as well as, more broadly, the applications of Automatic Control in industrial production (including the steel, chemical, oil and electrical industries) and in marine applications.

The six members of the British team were: Professor A. Tustin (Leader) and Messrs. A. Asbury (Industrial applications), S.S. Carlisle (Iron and Steel research), P.H. Hammond (Control mechanisms), R.H. Tizard (Consultant) and A.J. Young (Chemical Industry).

USA

The ISA Programme for 1960

The ISA (Instruments Society of America) has scheduled for 1960 three conferences and exhibitions, five symposia and two congresses and conferences in co-operation with other organizations.

The three ISA Conferences and Exhibitions will take place:

- From February 1 to 5 - in Houston, Texas
- From May 9 to 13 - in San Francisco, California
- From September 26 to 30- in New York City (in conjunction with the 15th Annual Meeting)

As to the five symposia, they will be the following:

- From March 9 to 11 - on Temperature measurement, in Columbus, Ohio
- From April 5 to 7 - on chemical and petroleum instrumentation, in Rochester, N.Y.
- From May 2 to 5 - on flight test, in San Diego, California
- From May 9 to 11 - on power instrumentation, in San Francisco, California
- From June 1 to 3 - on instrumental methods of analysis, in Montreal, Canada

The two other events will be:

- From April 3 to 8 - Sixth Nuclear Congress in New York City under the sponsorship of the Engineers Joint Council with the co-operation of ISA
- In May - Ninth National Telemetering Conference, West Coast, in co-operation with the American Institute of Electrical Engineers, the American Rocket Society and the Institute of Aeronautical Sciences.

Particulars can be obtained from: Instruments Society of America, 313 Sixth avenue, Pittsburgh 22, Pennsylvania.

The 1958 Automation Congress and Exhibition

We have published in our No. 2 Bulletin (page 17) a short information on the Congress and Exhibition.

We are asked now to rectify this information and to indicate that this Congress and Exposition were held in New York (and not in Philadelphia) and that the registered attendance was 12.910 (and not about 8.000 visitors as reported), which we most willingly do.

PUBLICATIONS

Austria

The new magazine MTW (Mathematik, Technik, Wirtschaft - Mathematics, Technology, Economy) publishes in its No. 1, 1959, amongst other information, the following articles:

- "Data processing in business and public offices" by Dr. Walter Knödel.
- "Fundamentals of Input-Output Analysis" by Dr. J. Pfanzagl.
- "Features and limits of automatic devices" by Dr. H. Zemanek.
- "Engineering Schools in Automation age" by Fritz W. Mayer.

The magazine is published by Stiasny Verlag in Graz, Austria.

Belgium

Review A

The "Revue A" published by IBRA (Institut Belge de Régulation et d'Automatisme) contains in its No. 4 (March 1959) the following articles:

- "Some aspects of the actual development of automation in Belgium" by Prof. J. Hoffmann.
- "Sampling of signals with a limited frequency spectrum" by J. Charles.
- "Continuous and discontinuous systems" by J. Loeb.
- "Experimental reactor and simulator for research purposes" by M. de Grootte.
- "Dynamic response of thermoelectric couples" by M. Ajbinder.

Proceedings of the Automatization Symposium in Liège

IBRA has also published the proceedings of the Automatization Symposium which has been organized by this Belgian Society in Liège on September 10, 1958, under the sponsorship of IFAC and on the opportunity of the 31st International Congress of Industrial Chemistry. These proceedings contain the following 13 papers and corresponding discussions:

- "Automatic checking of air excess in power station boiler combustion chambers" by I. Bovijn (Belgium).
- "Spectral analysis of carbon and of phosphor in steel and cast iron" by A. Daniels (Belgium).
- "Reflexions on Systems Engineering" by M.G. de Henau and M. Ajbinder (Belgium)
- "Some aspects of Automatic Control problems in drying" by I. Delvaux and M. Ajbinder (Belgium).

- "Considerations on the choice of Automatic Control Valves and, more particularly, for oil industry" by B.de Vriendt (Belgium)
- "Control loop of an installation for NH₃ synthesis" by G. Eifert (Germany)
- "Applications of the transistometric method to serial, continuous and remote analysis" by L. Gierst (Belgium)
- "Continuous acidity measuring and automatic control of ammonium sulfate saturator with pH-meter" by N. Kishimoto (Japan)
- "pH-measurement and control in sugar industry" by G. Naveau (Belgium)
- "Introduction of process control and of automation in a new hydro-metallurgical plant of Katanga" by Ch. Pledboeur and F. Snyts (Belgium Congo)
- "Automatic checking of corrosion in water-steam power plant circuits" by J. Pirrotte (Belgium)
- "Some aspects of automatic checking of chemical production" by E. V. Rouir (Belgium)
- "Automatic control of the electric wire melting process" by W. P. J. van Berkel (Holland)

These Proceedings (84 pages, illustrated) can be obtained from:

Institut Belge
de Régulation et d'Automatisme
3, rue Ravenstein
Bruxelles / Belgium

at a price of 50 Belgian francs per copy.

Czechoslovakia

New Books

The following abbreviations are used for publishers:

- SNTL - Státní nakladatelství technické literatury, Prague
- SVTL - Slovenske vydavateľstvo technickej literatury, Bratislava
- Prace - Vydavatelstvo ROH, Prague
- VTS - Vedecko-technická společnost, Prague

A) Books published:

1. V. Elznic. Computing machines in practice. SVTL 1958.
2. E. Charvat and B. Pospisil. Selsyns, elements for automation. SNTL 1959.
3. A. Maslov and A. Prejs (translated from Russian) Mechanization and automatization in sheet metal pressing shops. SNTL 1958.
4. K. Pesan and J. Kolar. Organization and management of computing machine centres. Prace 1958.

B) Books to be published shortly:

1. Automatization and mechanization of welding in the machine industry and transportation. Prace 1959.
2. J. Kolar and K. Pesan. Punched-card operation design. VTS-Prace 1959.
3. J. Kolar. Punched-card design. VTS-Prace 1959.
4. Koubek. Examples of assembly mechanization and automatization.
5. M. Kuba and M. Langer. Accounting machines and their applications. SNTL 1959.
6. F. V. Majorov (translated from Russian). Electronic Controllers. SNTL 1959.
7. Polak. Automatization of cooling equipments. Prace 1959.

All above mentioned books are in czech or slovac language.

Germany

New Magazines

A new review "Elektronische Rechenanlagen" is published by R. Oldenbourg Verlag, Rosenheimer Strasse 145, München 8, Germany.

This review, published every 3 months, is devoted to data processing techniques and applications in science, economy and administration. The subscription rate is 40 marks (42 marks for foreign countries), yearly, or 12 marks for a single issue. Each issue will contain approximately 48 pages. A sample copy can be obtained for 5,50 marks.

Since the beginning of the year 1959, the quarterly magazine "Regelungstechnische Praxis" (Practice of Automatic Control) is published by Messrs. Oldenbourg of Munich, Germany. This magazine is attached to the magazine "Regelungstechnik", but may also be subscribed independently. The contents of this magazine refer mainly to topics of interest for engineers of medium level and for foremen active in the application of control apparatus. The general topic of the first issue has been Control in the Chemical Industry. The second issue deals with the design and use of control valves. The third issue will deal with the control of heating and air conditioning plants.

New Books

Automatisierung in der Fertigung (Automatization of manufacturing processes). VDI-Berichte, Band 40 (1959). This book contains the results of a team work achieved in 1957/58 by a VDI Committee under the chairmanship of G. M. Dolzalek on the principles of automatic manufacturing. (Published by VDI-Verlag, Düsseldorf 10, Price DM 11.10).

Switzerland

The ASFA has published its report No. 3 containing the following two articles:

- Review of the full-automatic electronic control of machine-tools by Prof. Ed. Gerecke.
- Elements for machine-tools with automatic carriage movement by Dr.Ing. Ernst Salje.

Full particulars can be obtained from

Association Suisse pour l'Automatique
Sternwartstrasse 7
Zurich 6 / Switzerland

United Kingdom

New Books

- W.G. Holzbock: Automatic Control. Principles and Practice.
60 shillings. Published by Chapman & Hall Ltd.
- A.K.Susskind: Notes on analog-digital conversion techniques.
80 shillings. Published by Chapman & Hall Ltd.
- A.G. Warren: Mathematics applied to electrical engineering.
464 pages, 150 illustrations. 70 shillings.
Published by Chapman & Hall Ltd.
- John L.Bower and Peter Schultheiss: Introduction to the design of servo-mechanisms.
521 pages, illustrated, 104 shillings.
Published by Chapman & Hall Ltd.

USA

The English translations of the following four leading USSR technical journals:

- 1^o. - Izmeritelnaya Tekhnika (Measurement Techniques)
- 2^o. - Pribory i Tekhnika Eksperimenta (Instruments and Experimental Techniques)
- 3^o. - Avtomatika i Telemekhanika (Automatics and Remote Control)
- 4^o. - Zavodskaya Laboratoriya (Industrial Laboratory)

are available from

Instrument Society of America
313 Sixth avenue
Pittsburgh, 22, Pennsylvania

For details of item No. 3 (Avtomatika i Telemekhanika), please refer to our previous note in Bulletin No. 2, page 23.