

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS

33 WEST THIRTY-NINTH STREET

NEW YORK 18, N. Y.



In April 1956 our membership was solicited for information necessary for our Year Book. At the same time additional information was required relative to the Business and Industry and Occupation and Function of our members as well as their Technical Committee interest. The following form of card was mailed to all members with full instructions and the results of those replying are summarized below and detailed on the following pages.

REPORT FOR 1956-1957 AIEE DIRECTORY	
Please inform us of your present business affiliation in this space	
Company name <u>Electrical Manufacturing Co.</u>	MEMBERSHIP INTEREST QUESTIONNAIRE I Business or Industry <u>2(a)</u> II Occupation and Function <u>D</u> III Technical Committee Interest . . (1) <u>65</u> (2) <u>61</u>
Company address <u>123 Voltage Drive</u>	
<u>East Chicago, Ind</u>	
Title <u>Chief Design Engineer</u>	
Are you a Registered Professional Engineer? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
E. E. ENGINEER 987654 240 TURBINE ST SOMEPLACE, CALIF. <u>16 Generator Ave.</u> <u>Anotherplace 16, Ind.</u>	NONMEMBER subscribers to ELECTRICAL ENGINEERING, please check below: Do you subscribe, (a) For your personal use..... (b) For your company or its library..... (c) For a public or educational library.....
If your mailing address above is incorrect or incomplete, kindly indicate changes:	

MEMBERSHIP CLASSIFICATIONS SURVEY

(49,000 plus members solicited)

Registered Engineers

Yes	15,216
No	19,899
No answer	770
Total replies	<u>35,885</u>

Business and Industry

Total classified as per attached	34,120
Unclassified	1,765
Total replies	<u>35,885</u>

Occupation and Function

Total classified as per attached	34,519
Unclassified	1,366
Total replies	<u>35,885</u>

Primary Technical Committee Interest

	Preference	
	First	Second
Total classified as per attached	31,761	31,036
Unclassified	4,124	4,849
Total replies	<u>35,885</u>	<u>35,885</u>

8,43,387

COMMITTEE	Preference		% of Total	
	1st	2nd	1st Pref.	2nd Pref.
COMMUNICATION DIVISION				
10 COMMUNICATION SWITCHING SYSTEMS Manual & automatic facilities; apparatus	927	380	2.92	1.23
11 COMMUNICATION THEORY Principle & theory not under other committees	495	637	1.56	2.05
12 RADIO COMMUNICATION SYSTEMS Point-to-point, radio relay, mobile, etc.	766	658	2.41	2.12
13 TELEGRAPH SYSTEMS Equipment; facsimile, telephoto, teletype, etc.	159	212	.50	.68
14 TELEVISION & AURAL BROADCASTING SYSTEMS Broadcasting, pick-up, transmitting facilities	206	275	.65	.89
15 WIRE COMMUNICATION SYSTEMS Apparatus; open-wire lines; land, submarine, etc.	764	718	2.40	2.31
Totals	3,317	2,880	10.44	9.28
GENERAL APPLICATIONS DIVISION				
20 AIR TRANSPORTATION Design, installation type and use of equipment	722	253	2.28	.82
21 DOMESTIC AND COMMERCIAL APPLICATIONS Interior wiring, control, appliances	728	392	2.29	1.26
22 LAND TRANSPORTATION Design, operation, apparatus, and material	409	104	1.29	.34
23 MARINE TRANSPORTATION Machinery, installation, materials on shipboard	222	118	.70	.38
24 PRODUCTION AND APPLICATION OF LIGHT Conversion of electrical energy	258	290	.81	.93
Totals	2,339	1,157	7.37	3.73
INDUSTRY DIVISION				
30 CHEMICAL INDUSTRY Electrical applications and material; generation of electricity by chemical processes.	272	126	.86	.41
31 ELECTRIC HEATING Design, equipment, installation, use	246	190	.77	.61
32 ELECTRIC WELDING Installation, equipment, construction, control	121	95	.38	.31
33 FEEDBACK CONTROL SYSTEMS Design, operation, servomechanisms, regulators, governors, etc.	1,308	917	4.12	2.95
34 GENERAL INDUSTRY APPLICATIONS Requirements, installation, and design of machine tools and processing equipment for textile, rubber, plastic, paper, etc.	1,534	996	4.83	3.21
35 INDUSTRIAL CONTROL Design, construction, performance	1,402	1,496	4.42	4.82
36 INDUSTRIAL POWER RECTIFIERS Design, construction, and operation of electronic and mechanical energy conversion	165	196	.52	.63
37 INDUSTRIAL POWER SYSTEMS Generation, transmission of electric power within plant	1,411	1,310	4.44	4.22
38 MINING AND METAL INDUSTRY Machinery for mining; processing metal	283	217	.89	.70
39 PETROLEUM INDUSTRY Design and operation of machinery for petroleum and gas industry	311	195	.98	.63
Totals	7,053	5,738	22.21	18.49
INSTRUMENTATION DIVISION				
50 INDICATING AND INTEGRATING INSTRUMENTS Electrical methods; devices included	407	300	1.28	.97
51 RECORDING AND CONTROLLING INSTRUMENTS Electrical methods; devices included	324	652	1.02	2.10
52 ELECTRONIC AND HIGH-FREQUENCY INSTRUMENTS Electrical methods; devices included	240	306	.76	.99
53 SPECIAL INSTRUMENTS & AUXILIARY APPARATUS Electrical methods; devices, transducers, etc.	383	507	1.21	1.63

COMMITTEE (CONT'D)	Preference		% of Total	
	1st	2nd	1st Pref.	2nd Pref.
INSTRUMENTATION DIVISION (CONT'D)				
54 TELEMETERING Matters in which telemetering is a factor, both stationary and mobile	148	304	.47	.98
55 NUCLEONIC AND RADIATION INSTRUMENTS Electrical methods; devices included	100	192	.31	.62
56 FLIGHT TEST INSTRUMENTATION Electrical methods; devices included	3	332	—	1.06
	<u>1,605</u>	<u>2,593</u>	<u>5.05</u>	<u>8.35</u>

POWER DIVISION

60 CARRIER CURRENT Design and operation of equipment, and circuits for electric systems	327	268	1.03	.86
61 INSULATED CONDUCTORS Cable, accessories for power, utilization systems	811	569	2.55	1.83
62 POWER GENERATION Design and operation of stations, equipment; energy sources	2,220	1,189	6.98	3.83
63 PROTECTIVE DEVICES Equipment to prevent damage to power systems	489	947	1.54	3.05
64 RELAYS Design, construction, operation	482	498	1.52	1.61
65 ROTATING MACHINERY Design, requirements, operation, electrical energy generation, conversion; transmission of mechanical energy	1,673	1,105	5.27	3.56
66 SUBSTATIONS Design and installation, automatic and manual switching and transformer stations	1,236	1,946	3.89	6.27
67 SWITCHGEAR Design and application of equipment to make, interrupt, change connections	829	1,026	2.61	3.31
68 SYSTEM ENGINEERING Design, planning, operation of interconnected systems	1,695	1,883	5.34	6.07
69 TRANSFORMERS Design, construction, operation; includes reactors	979	684	3.08	2.20
70 TRANSMISSION AND DISTRIBUTION Design, installation, operation of overhead lines; system stability	2,552	2,389	8.04	7.70
Totals	<u>13,293</u>	<u>12,504</u>	<u>41.85</u>	<u>40.29</u>

SCIENCE & ELECTRONICS DIVISION

80 BASIC SCIENCES Electrophysics not covered by other committees	497	655	1.57	2.11
81 COMPUTING DEVICES Design, selection, operation, applications, machinery, devices and phenomena thereof	1,081	1,221	3.40	3.93
82 DIELECTRICS Theory, practice except for specific apparatus applications	191	325	.60	1.05
83 ELECTRICAL TECHNIQUES IN MEDICINE & BIOLOGY Intercommunication between electrical engineers and physicians and biologists	134	213	.42	.69
84 ELECTRONICS Characteristics of devices and their circuits	1,382	1,932	4.35	6.23
85 MAGNETIC AMPLIFIERS Development, design, application, materials	303	557	.96	1.79
86 METALLIC RECTIFIERS Semiconductors; power rectifiers, application	115	188	.36	.61
87 NUCLEONICS Design, behavior of devices or systems	258	425	.81	1.37
88 SOLID STATE DEVICES Ferrites; ferroelectric, nonlinear dielectrics, semiconductors, phosphor, photoconductive material	193	648	.61	2.08
Totals	<u>4,154</u>	<u>6,164</u>	<u>13.08</u>	<u>19.86</u>
Grand Totals	<u>31,761</u>	<u>31,036</u>	<u>100.00</u>	<u>100.00</u>

BUSINESS AND INDUSTRY CLASSIFICATION

7,382 1. **ELECTRIC POWER AND LIGHT COMPANIES, AND THEIR HOLDING AND MANAGEMENT COMPANIES;**

Engineering Construction, Operation, Maintenance, Management, Load Building, Purchasing & other Employees

2. **ELECTRICAL - ELECTRONIC MANUFACTURING COMPANIES:**

7,639 2 (a) **Power Apparatus:** Motors, generators, transformers, rectifiers, switchgear, wire & cable, meters, and instruments and all electric equipment, for railway, marine and industrial plants

4,903 2 (b) **Electronic Equipment Manufacturers:**
Communication & point-to-point equipment, such as home & commercial television & radio transmitting & receiving equipment, audio equipment & associated assemblies, radar, sonar, loran, guided missiles & other ordnance, aircraft electronic equipment, telemetering, electronic signaling, military communications & control, navigation equipment, telephone & telegraph equipment, industrial electronic apparatus, production & research equipment for mathematical, electrical, chemical & physical qualitative & quantitative analysis, measurement & control, such as test, measuring, recording, nuclear & geophysical instruments, electronic business machines, computers & electronic systems—engineering products

1,084 2 (c) **Components & Parts** going into the above electronic products, including electron tubes, transistors and other semi-conductors, resistors, transformers, capacitors, printed circuits, relays, speakers, antennas, connectors, terminals, sockets, meters, rectifiers, motors, crystals, servos, potentiometers, switches, chassis, housing & sub-assemblies, insulators & solders

3. **COMMERCIAL USERS OF ELECTRICAL-ELECTRONIC PRODUCTS**

1,709 3 (a) **Operators** of communication equipment such as AM, FM, & TV broadcasters, recording studios, communication services such as police, fire, taxi, truck & bus, marine & other mobile, utilities, telephone & telegraph, railroads, airlines, aircraft ground stations, sound pictures, recording studios

3,486 3 (b) **Company and industrial plant users** of electric-electronic equipment for

power, production, testing & research such as automotive, electrical, chemicals, petroleum, rubber and plastics, iron and steel, aluminum, copper, mining, machine tool, systems-engineering assemblies, electronic heating ultrasonic, or using electronic devices & controls as part of their product, as well as railways, air, and marine transportation

3,370 4. **CONSULTING ENGINEERS & THEIR STAFFS—**

Including service organizations; construction, architectural & electrical contracting firms, electrical, mechanical & illuminating consultants, and testing laboratories.

5. **GOVERNMENT; FEDERAL & FOREIGN:**

893 5 (a) **Government laboratories**, such as Navy, Army, Air, Bureau of Standards

545 5 (b) **Personnel engaged in management**, operation & maintenance of communications, aircraft, military, sound & recording equipment

1,010 5 (c) **Other government including personnel in general**, state, municipal, and public service commissions—executives & manufacturing occupations & procurement

6. **EDUCATIONAL:**

1,336 6 (a) **University, college & professional school researchers**, professors, instructors, department heads & libraries

81 6 (b) **Students in accredited colleges & schools**

14 7. **LIBRARIES:** Public

603 8. **MISCELLANEOUS**65 9. **AWAITING CLASSIFICATION**

34,120 Total classified

OCCUPATION AND FUNCTION

41 A **Subscriber in company name including company libraries**

2,835 B **Owners, Partners, Corporate Officers, General Managers & Managers (Except C to H)**

6,421 C **Production, Operating & Maintenance**

16,862 D **Design, Development, Applications, Theory & Research**

3,369 E **Commercial, Sales, Advertising & Purchasing**

2,545 F **Consultants, Contractors & Construction**

1,281 G **Teaching & Education**

1,165 H **Other**

34,519 Total classified