HALINCO N-LIGHTS

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Let's Get Technical - By Bill Breyer Thermotrol, Thermodyne and Resistotrol are the trade names of Hallikainen temperature controllers. A simple type of temperature controller familiar to all of us is the thermostat on the furnace or oven in our homes. In industry, physical changes in materials at certain temperatures play an important part in the manufacture of most products, so in processing a

product such as steel, molded plastics, glass and food, maintaining an exact temperature during a particular phase of a process is frequently of vital consequence to the satisfactory outcome of the item. Temperature controllers accomplish this. Our temperature controllers, however, are most widely used in laboratories, research centers and calibration centers as a standard for setting other instruments accurately.

The Thermotrol looks about like a table model radio and must be used in conjunction with a sensing element located in the liquid or oven to be controlled, and a heater which will respond to and rectify changes in temperature beyond the desired limits. With our controllers we use a resistance thermometer as a sensing element. These must be manufactured to exact specifications, as the precision of the whole system depends on the sensitivity of the resistance thermometer. It is not an ordinary thermometer, but consists of many turns of very fine wire with an electric current running through. The resistance varies with temperature, and the controller compares the resistance of the element with whatever resistance has been set by the dials. If there is a difference, the controller will change the heater output until the sensing element has a resistance equal to the resistance set in the controller.

The outstanding feature of our temperature controllers is their ability to control temperatures within very fine limits. Our Thermotrol and Thermodyne can control the temperature of a water tank (used for calibrating thermometers) to plus or minus two thousandths of one degree. Our less expensive Resistotrol is capable of plus or minus one hundredth of one degree temperature control. This fine control is unsurpassed by any of our competitors' instruments.

We sell many of these temperature controllers installed in our larger instruments, as they are an important part of the system in most analyzers. There is also a large demand for them as separate items by companies such as Ford Motor Company, Boeing Aircraft Company and the U.S. Government Bureau of Standards for use in laboratories where the dependable high precision of Hallikainen temperature controllers makes them an invaluable aid in research work.

Five-year Employee. Pui C. Leung, the man with the reputation for minding his own business, completed five years with the company last January 14th. Always deeply engrossed in thought, he seems not even to see people, but don't be fooled by this. Leung knows who you are, and if you interrupt his preoccupation, you discover a charming smile and a delightful sense of humor. He grew up in South China and then went to Pelping to Tsing Hua University for his bachelors degree in Electrical Engineering. He had his own electrical company until business became too difficult in Canton and he took his family to Hong Kong. They lived 6 years in Hong Kong before coming to the U.S. We hired Leung "just off the boat" from China, and it proved to be a stroke of good fortune indeed. As head of the test department, Leung is responsible for making sure that all of the instruments function properly before they are shipped. He also works on research problems and mathematical calculations in conjunction with the Engineering Department and can always be depended upon to come up with a good idea to solve the problem. Every morning we see him pedaling to work on his bicycle (he enjoys the 15 minutes exercise and leaves the car home for his wife). In his spare time he works in his shop at home where he has just finished designing and building a completely transistorized amplifier for his hi-fi set. The Leungs live in Berkeley. They have a son 16 and a daughter n.

New Engineer. Stan Alter has been added to the engineering staff as a design draftsman. He comes to us with extensive experience and has been assigned to work with Mr. Bramson and John Chin on the medical instruments. He He grew up in Pennsylvania where his father was a Presbyterian minister. After graduation from high school, he went to Coyne Technical School in Chicago and studied engineering. W.W. II brought him to Mare Island where he worked for the Navy in the engineering design department. He liked it so well here that he decided to stay and has worked for several instrument companies in, this area. The past three years he spent doing design drafting for the Microchemical Company here in Berkeley. Stan does some amateur photography for fun, builds garden furniture and enjoys camping with his family. The Alters' home in San Pablo is over 100 years old, as it was one of the first houses in the area on a Spanish land grant. Stan's two daughters are seniors at San Jose State, Barbara in Medical Technology and Nancy in Elementary Education.

Going Home. John Kaufmann is now on his way back to Switzerland with his family. They may decide to remain there to live.

PHONE

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<u>Promotion.</u> <u>Opal Taylor</u> has taken over the job of Purchasing Agent since Howard Kirk left to accept a job with the East Bay MUD. Opal has been with the company since September of 1960. She had previously worked for Thaler Pipe where, as assistant purchasing agent she had been working with the same line of valves and fittings that we use on our instruments. She started here as Production Clerk, was promoted to buyer and assistant to Howard, and in this job proved herself capable of handling this promotion to Purchasing Agent. Her prime qualification, I am told, is her ability to smile most charmingly at salesmen and get rid of them in short order.

<u>Rae Zolman</u> has moved down from engineering to be Opal's assistant and also carry the interoffice mail.

New Girl! Dee Fenster has taken over the job of getting the typing out for the engineering department. Her past accomplishments include growing up in Philadelphia, taking an academic course at Olney High, taking nurses' training for a year at Einstein Medical Center (which was enough to convince her that she would rather do something else), serving as a volunteer ambulance nurse, and working for three years at Minneapolis-Honeywell as a secretary in the sales engineering department. Three weeks ago the thought struck her that she had never been west of Philadelphia, so she and another girl started driving and came all the way. Dee enjoys most sports and plays on the noon volleyball team here at the company. For fun, she has a record collection of popular show tunes and Calypso. She and her friend live in Emeryville, because they couldn't find another place that would rent to two girls and a dog named "Gumdrop".

<u>Custodians</u>. Since Jack O'Keefe got a full-time job and decided to cut his working hours down to eight hours a day, he is no longer roller skating around the plant with his broom. We had to hire another janitor! Leslie Bowden is a local boy, went to Harry Ells High in Richmond and has completed a year of pre-law at Contra Costa College. He is now sweeping our floors to help finance the rest of his schooling. He is handsome, beautifully mannered and soft spoken -- all of which is completely wasted on this empty building at night. Les is an avid fisherman and presently prefers trout fishing because he likes the mountains; however, he is just waiting for an opportunity to go salmon fishing, which he thinks might be even more interesting. He enjoys hunting also, and has a gun collection which includes an antique or two given to him by his father. He lives in Richmond with his parents and his sister.

<u>Congratulations to M.L.B.</u>! A Hektoen Medal was awarded to <u>M.L. Bramson</u> and Dr. Harkins for their presentation of our Heart Massage Machine and Portable Resuscitator at the Annual Meeting of the American Medical Association in Chicago. The 370 exhibits were judged, and medals were awarded to the three most outstanding for originality and excellence of presentation.

<u>New Parents</u>! The <u>Eero Vasankaris</u> have increased the Finnish-American population by one. Their baby daughter, Christine, was born August 10th -- a blue-eyed blonde, of course.

The Erich Liskes are the proud parents of a baby boy, David Eric, born July 23rd. Erich left the assembly department last month to accept another job.

New Assembler. The new man in assembly is John Shackleford. Originally from Florida, he went to high school in Tampa and then joined the Navy. During his 9 years of active duty, he received his technical training, sailed the seven seas and had duty stations in the Phillippines, Spain, Iceland, Texas and Maine. For the past year he has been working as a civilian in the overhaul and repair department of the Naval Air Station in Alameda. His varied interests include leathercraft, coin collecting, historical novels, auto mechanics, sports and eating interesting and different food in foreign restaurants. His next immediate project is to start night school at Oakland City College to accumulate credits toward a degree in Mechanical Engineering. He is interested also in buying a ranch so that his two boys, now 3 and 6, can have the fun of spending their vacations in the country. John lives in Oakland and is a member of the active reserve in training in airways communications.

Who's Doing the Job? If <u>Bill Breyer</u> is looking a bit weary these days, it is from running the company single-handed for two weeks while <u>Mr. Schimbor</u> was on vacation and <u>Mr. Hallikainen</u> was in the hospital for his unexpected surgery. However, E.F.S. is back taking charge of things again and K.E.H. is home in Orinda recuperating and obeying the doctor's orders. We expect him back September 4th in top shape.

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