

AUTOMATIONS FROM THE TECHNION

(Continued from page 1)

Your picture of a robot may be pure Star Wars, but reality is different. Cosmetically and functionally, today's robots contrast the silver-bodied androids that are the darlings of science fiction. The Unimatic robot arm, for example, stands unpretentiously in a corner of the Robotics Laboratory at the Technion-Israel Institute of Technology in Haifa, resembling an oversized dentist's drill. But despite its humble appearance, Unimatic represents a breakthrough in the way future industry will manufacture products. Able to "handle" fragile items that are as thin as half the diameter of a human hair, Technion's robot gripper is a significant milestone in the brave new world of automatic assembly-line manufacturing.

Robotics is an ideal industry for Israel. The country possesses an abundance of engineers and scientists to bring Israel the high-technology enjoyed by other post-industrial nations. What Israel lacks, however, is the necessary unskilled labor needed to perform the routine and toilsome tasks in factories and fields -- the kind of work robots do so effectively and efficiently. Not only will industrial robots boost productivity, but robot technology can be exported as a major source of revenue for Israel.

The Robotics Laboratory at the Technion in Haifa is the source of Israel's robotic industry. Technion introduced robots to Israel four years ago when the Robotics Laboratory opened its doors with an \$80,000 dollar grant from the country's Ministry of Commerce and Industry. Presently, it is still the only institute in Israel providing course work in robotics. Graduates go on to assist private industry and kibbutz-owned enterprises on robotic projects.

All the industrial robots on the drawing boards for Israeli industry have their genesis at the Technion. These include a device that assembles twenty components into a stovetop range, a "robot doctor" that diagnoses other robots' ills and instructs a technician how to cure them and "sighted" robot that picks fruit,

A 37-year-old woman, serving a five-year sentence in internal exile for her efforts to expose Soviet psychiatric abuse, has been told by a KGB doctor to terminate her pregnancy, it was learned by the Bay Area Council on Soviet Jewry.

Irina Grivnina, who is Jewish and six months pregnant, was ordered to see one of the few doctors in Krasny Yar, her village of exile. After a brief examination, the doctor told her she was suffering from acute kidney inflammation and that the pregnancy should be immediately terminated. Grivnina, who felt perfectly healthy, refused.

She later went to another doctor under an assumed name. The second doctor examined her and said she was in excellent condition.

Grivnina, who is due to give birth in early June, is scheduled to be released from exile in late June. The Soviets have recently been re-arresting many individuals upon com-

pletion of their sentences, trying them on trumped-up charges, and keeping them in prison, labor camps, and exile for additional periods. It is presumed that the birth of a child would have made re-arrest of Grivnina more difficult.

A few days after her examination, Grivnina was called to the local police station and told she was to begin work at a construction site -- obviously an attempt by authorities to induce a miscarriage. She was told that if she refused she would face charges of "parasitism" or be transferred in exile to the worst place in Siberia. Grivnina rejected the construction job, claiming she already worked and paid appropriate taxes from the knitting of sweaters she took on commission.

Assuming Grivnina is permitted to carry the child to term, she will have to give birth in Krasny Yar, where there is no hospital and the only doctor who is officially allowed to help her has said that because she did not heed his earlier advice, she could not count on his medical assistance in the future.

Ten years ago, when Grivnina's first child was born -- in a well-equipped Moscow hospital -- both mother and child nearly died. Due to the placement of her womb, childbirth is extremely dangerous for Grivnina. Without the necessary medical facilities, prospects for a healthy delivery appear grim.

Grivnina was a member of the Moscow-based "Working Commission to Investigate the Use of Psychiatry for Political Purposes in the USSR." She forwarded food parcels to political prisoners and travelled throughout the Soviet Union offering moral and material support to dissidents and their families. She was arrested in September, 1980 and charged with "anti-Soviet slander."

In a related story, the Soviet Union last month announced it was withdrawing from the World Psychiatric Association. This came just five months before a scheduled investigation by the Association into Soviet psychiatric abuse.

Please send letters on behalf of Irina Grivnina to: Yuri Andropov, The Kremlin, Moscow, RSFSR, USSR; President Ronald Reagan, The White House, Washington, D.C.

Technion's robotic experts have focussed their ingenuity on the development of robots for small-scale manufacturing and production, rather than compete with the giant robot-makers of Japan and West Germany which have had a ten year jump on Israel. "Our strength is in the laboratory," explains Professor Yoram Koren, Senior Lecturer at Technion's Faculty of Mechanical Engineering and head of the Robotic Laboratory. Research at the Robotic Laboratory emphasizes computer-like programs which translate into improved control for robotic arms, and new designs for sensors endowing robots with the ability to see, feel and even hear. It is innovation in this area of sensory, or "smart robots, that enable the Unimatic robot gripper to manipulate delicate, easily-crushed parts with greater sensitivity than ever before possible."

Eventually, says Professor Koren, oranges and avocados grown in Israel will be picked and packaged by mechanical hands. Completely automatic factories will design and manufacture products by computer. "All phases of production, assembly, and testing will be robot operated," predicts Koren, "with the minimum of human intervention."

Holiday Wishes

Home of the
Giant
Shrimp Cocktail
50c



ONE FREMONT STREET
LAS VEGAS, NEVADA 89101
TELEPHONE (702) 382-6300



Holiday Greetings



Bingo Palace Casino

Sahara at Rancho