

China
1-15 Nov 89

UNCLASSIFIED

* * * * *

SG1J

SEQUENCE NR: CIF90005966 USER: [REDACTED] ID: 43070-92APR28/10.52.06/A01

TITLE: DEFENSE SCIENCE, TECHNOLOGY, AND INDUSTRY REPORT, 01-15
 NOV 89

DOC NR: 6842022590, 22 PP
 DOC DATE: 900125/0347
 FICHE NR: DST90C002906
 ORIGINTR: USDLO HONG KONG
 REQ NR: D-T5B1875-03 (DT5B187503)
 SOURCEID: 6-842-0229 (68420229)
 INF CTY: PEOPLES REPUBLIC OF CHINA (CH)
 INF DATE: 891101-891115
 COSATI: BEHAVIORAL AND SOCIAL SCIENCES (05); AVIATION TECHNOLOGY (01); MILITARY SCIENCES (15); MECHANICAL, INDUSTRIAL, CIVIL AND MARINE ENGINEERING (13); COMMUNICATIONS (FORMERLY PART OF COSATI CODES 09 AND 17) (25); ELECTROTECHNOLOGY AND FLUIDICS (09); POWER PRODUCTION AND ENERGY CONVERSION (NON-PROPULSIVE) (10); BIOLOGICAL AND MEDICAL SCIENCES (06); ORDNANCE (19)

CLASSIF: UNCLASSIFIED
 RELEASE: NONE (XX)

TEXT: ENTIRE. DOCUMENT CONTAINS NUMEROUS REFERENCES.

THIS REPORT PRESENTS A SUMMARY OF ACTIVITIES IN THE PRC DSTI SECTORS FROM 1-15 NOVEMBER.

TABLE OF CONTENTS: 1. DSTI ORGANIZATION; 2. DSTI FINANCE AND MANAGEMENT; 3. SIGNIFICANT DEFENSE R-AND-D ACHIEVEMENTS; 4. MINISTRY OF AEROSPACE INDUSTRY; 5. SHIPBUILDING INDUSTRY; 6. MINISTRY OF MACHINE BUILDING/ELECTRONICS INDUSTRY; 7. COMMUNICATIONS, COMMAND, AND CONTROL DEVELOPMENTS; 8. NUCLEAR/ELECTRIC POWER INDUSTRY; 9. MEDICAL SCIENCE; 10. PLA SERVICES AND ARMS R-AND-D ACHIEVEMENTS; 11. DEFENSE CONFERENCES AND EXHIBITIONS; 12. DSTI AWARDS AND RECOGNITION.

DSTI ORGANIZATION. PLA'S FIRST SOFT SCIENCE RESEARCH CENTER SET UP AT NATIONAL DEFENSE SCIENCE AND TECHNOLOGY (S AND T) UNIVERSITY (HUNAN DAILY, 5 NOV). THE CENTER WAS SET UP ON 3 NOV UNDER THE DIRECTION OF THE COMMISSION ON SCIENCE, TECHNOLOGY, AND INDUSTRY FOR NATIONAL DEFENSE (COSTIND) ON THE RECOMMENDATION OF DOCTOR (QIAN) XUESEN. THE CENTER WILL STUDY THE SCIENCES OF SYSTEMS MANAGEMENT, SCIENTIFIC DATA, FUTURE TECHNOLOGY, AND ECONOMICS TO AID NATIONAL DEFENSE DECISION MAKERS.

STATE COUNCIL CIRCULAR SETS UP SYSTEMATIC SYSTEM FOR NUMBERING ENTERPRISES, INSTITUTIONS, AND SOCIAL GROUPS (NEW CHINA NEWS AGENCY, NCNA, 5 NOV). THE CIRCULAR OUTLINES A SYSTEM OF UNCHANGEABLE, LEGAL CODE NUMBERS FOR ALL ORGANIZATIONS IN CHINA. THE SYSTEM, WHICH WILL TAKE 3 YEARS TO CARRY OUT, WILL BE IMPLEMENTED IN DEC 89 BY THE STATE BUREAU OF TECHNOLOGY SUPERVISION. A TEST PROJECT HAS BEEN

* * * * *

UNCLASSIFIED

PAGE

42

* * * * *

UNCLASSIFIED

* * * * *

SG1J

SEQUENCE NR: CIF90005966 USER- [REDACTED] ID: 43070-92APR28/10.52.06/A01

CONDUCTED IN HUNAN PROVINCE AND THE CITIES OF TIANJIN, CHONGQING AND SHENZHEN TO GAIN EXPERIENCE.

DSTI FINANCE AND MANAGEMENT. COSTIND DIRECTOR WARNS THAT DSTI SECTOR FACES NEW DEVELOPMENT SITUATION (SCIENCE AND TECHNOLOGY DAILY, STD, 2 NOV). (DING) HENGGAO CLAIMED THAT CHINA IS FACING ACUTE COMPETITION AND HIGH SPEED DEVELOPMENT IN THE WEAPONS AND EQUIPMENT FIELD. THIS WILL REQUIRE MANY NEW TECHNOLOGICAL BREAKTHROUGHS AND GREATER EMPHASIS ON FORMULATION OF LONG RANGE DEVELOPMENT STRATEGY. THE SECTOR WILL BE FACED WITH A SHORTAGE OF FUNDS FOR A FAIRLY LONG PERIOD OF TIME. THIS NECESSITATES THE FULL AND EFFECTIVE UTILIZATION OF EXISTING RESOURCES. DING STRESSED THAT TRANSPLANTING ADVANCED CIVILIAN TECHNOLOGY TO THE DSTI SECTOR TO SHORTEN THE RESEARCH-AND-DEVELOPMENT (R AND D) CYCLE FOR WEAPONS AND EQUIPMENT. EMPHASIS MUST BE PLACED ON PROPER OVERALL ARRANGEMENT OF MILITARY CIVILIAN PRODUCTION TO ENSURE SUSTAINED, STEADY, AND COORDINATED DEVELOPMENT. MILITARY ITEMS SHOULD BE ACCORDED PRIORITY TO ENSURE RAPID SCIENTIFIC R-AND-D AND PRODUCTION ARE FULFILLED. STRUCTURAL ADJUSTMENTS IN R-AND-D, EXPERIMENTAL AND PRODUCT TION UNITS SHOULD BE CARRIED OUT IN ACCORDANCE WITH THE LONG AND MEDIUM TERM WEAPONS AND EQUIPMENT DEVELOPMENT PLAN APPROVED BY THE CENTRAL MILITARY COMMISSION (CMC) AND THE DSTI DEVELOPMENT STRATEGY.

STATE COUNCIL PROGRAM TO STREAMLINE AND REORGANIZE GOVERNMENT ENTERPRISES DELAYED BY INDECISIVE MANAGERS (CHINA DAILY, CD, 3 NOV). DESPITE THE HIGH PRIORITY AFFORDED THE PROGRAM, IT HAS BEEN UNSUCCESSFUL IN HALTING RAMPANT INCREASES IN THE NUMBERS OF GOVERNMENT LINKED COMPANIES. THIS HAS OCCURRED BECAUSE DEPARTMENT HEADS AND LOCAL AUTHORITIES HAVE NOT EXERCISED EFFECTIVE LEADERSHIP; MOST ARE TAKING A WAIT AND SEE ATTITUDE. AS A RESULT THE EXISTING NUMBER OF BUSINESSES IS TOO HIGH, SALARY SCALES ARE TOO HIGH, AND THERE IS ILLICIT SPECULATION AND PROFITEERING GOING ON.

SHANGHAI PLANS 4-POINT STRATEGY TO OPTIMIZE SCIENTIFIC DEVELOPMENT DURING 8TH 5-YEAR PLAN (CD, 6 NOV). THE FOUR POINTS ARE CONTAINED IN THE ANTICIPATED S AND T DEVELOPMENT FOR 1991-5 REPORT PREPARED BY THE MUNICIPAL S AND T COMMISSION. THE FOUR POINTS ARE: (1) CONTINUED EMPHASIS ON USING HIGH TECH TO DEVELOP TRADITIONAL INDUSTRIES; (2) GIVING PRIORITY TO DEVELOPMENT OF BASIC INFRASTRUCTURE INDUSTRIES SUCH AS COMMUNICATIONS, TRANSPORTATION, ELECTRIC POWER, AND RAW MATERIALS; (3) ACCELERATING LOCALIZATION OF IMPORTED TECHNOLOGIES; AND (4) PROMOTING HIGH TECH DEVELOPMENT ESPECIALLY IN THE ELECTRONICS, INFORMATION, MACHINERY, NEW MATERIALS, BIOENGINEERING, AND COMMUNICATIONS INDUSTRIES.

SIGNIFICANT DEFENSE R-AND-D ACHIEVEMENTS. MULTIPURPOSE RIOT CONTROL VEHICLE SUCCESSFULLY TRIAL PRODUCED (CHINA MACHINERY/ELECTRONICS JOURNAL, CMEJ, 5 NOV). THE VEHICLE, WHICH CAN ACCOMMODATE 8 TO 10 PERSONS, OFFERS PROTECTION AGAINST SMALL ARMS, EVEN AT CLOSE RANGE.

* * * * *

UNCLASSIFIED

* * * * *

UNCLASSIFIED

SEQUENCE NR: CIF90005966 USER- [REDACTED] ID: 43070-92APR28/10.52.06/A01

IT IS EQUIPPED WITH AIR CONDITIONING, NIGHT VISION DEVICES, COMMUNICATIONS, FIRST AID, AND FIRE FIGHTING EQUIPMENT. IT CAN FIRE COLORED SMOKE SHELLS, HAS AN ELECTRIC SHOCK DEVICE, AND CAN BE EQUIPPED WITH A LASER DEVICE WHICH CAUSES BLINDESS, ZHIMANGQI /STC: 5268/4159/0892/, AND IS DESIGNED TO DISPERSE CROWDS QUICKLY. THE VEHICLE HAS A VIDEO CAMERA WHICH CAN RECORD IMAGES OF KEY RIOTERS FOR LATER PROSECUTION. (NOTE: SEE 16-31 JUL 89 DSTI REPORT FOR DATA ON ANOTHER RIOT CONTROL VEHICLE).

TWO HENAN PROVINCE CHEMICAL PLANTS BEGIN MASS PRODUCTION OF LOW COST ARTIFICIAL GASOLINE (HONG KONG TA KUNG PAO, TKP, 5 NOV). THE NEW TYPE HW LEAD FREE POWER GASOLINE WAS DEVELOPED BY ENGINEER (SONG) XIUQIANG /STC: 1345/0208/1730/, AND IS DIFFERENT FROM OTHER ARTIFICIAL FUELS SUCH AS METHYL ALCOHOL OR DENSITY BALANCED GASOLINE. THE NEW FUEL IS CHEAPER BECAUSE IT REQUIRES NO MIXING AGENT OR CATALYST. TESTS HAVE SHOWN THAT IT STARTS QUICKER, MAKES LESS NOISE, AND BURNS CLEANLY WITH A BLUE AND WHITE FLAME. ITS CHEMICAL AND PHYSICAL INDICES EXCEED THOSE STANDARDS STIPULATED BY THE STATE. THE FUEL IS PRODUCED FROM CHEAP BY PRODUCTS OF THE FOSSIL FUEL AND COKING INDUSTRIES, RAW MATERIALS WHICH ARE IN PLENTIFUL SUPPLY. IT IS COMPATIBLE WITH CHINA'S STANDARD 70-OCTANE FUEL BUT IS 10 PERCENT MORE EFFICIENT IN CONSUMPTION. (NOTE: ANOTHER REPORT ON A NEW SYNTHETIC FUEL CONTAINED IN DSTI REPORT FOR 1-15 OCT 89).

CHINESE ACADEMY OF SCIENCE (CAS) SEMICONDUCTOR RESEARCH INSTITUTE (RI) USES GALLIUM ARSENIDE MONOCRYSTAL TO PRODUCE SEMICONDUCTOR LASER DEVICE (TKP, 6 NOV). PROFESSOR (LIN) LANYING OF THE RI PRESENTED RESULTS OF AN EXPERIMENT CONDUCTED IN 1988 AT AN INTERNATIONAL MICROGRAVITY SEMINAR. THE RI USED THE MONOCRYSTAL AS A SUBSTRATE MATERIAL AND PRODUCED A LASER DEVICE WITH 20 MILLIWATTS POWER AT ROOM TEMPERATURE.

CAS SHANGHAI METALLURGICAL RI AND SHANGHAI ORGANIC CHEMICAL RI CREATE NEW SUPERCONDUCTIVE FILM (PEOPLE'S DAILY, PD AND NCNA, 10 NOV). THE TWO RI'S USED THE ORGANOMETAL LINAGE CHEMICAL GAS PHASE SEDIMENTATION METHOD TO DEVELOP AN YTTRIUM SUPERCONDUCTIVE MEMBRANE WITH ZERO RESISTANCE AT A MAXIMUM TEMPERATURE OF 0 DEGREES KELVIN (K). THE FILM CAN ACHIEVE A CURRENT DENSITY OF 16,000 AMPERES PER CENTIMETER (CM) SQUARE AT ITS TRANSITIONAL TEMPERATURE OF 77 DEGREES K.

CAS SOFTWARE RI RESEARCHERS DEVELOP CHINA'S FIRST ENGINEERING SOFTWARE PACKAGE (STD, 10 NOV). THE PACKAGE IS TECHNICALLY IDENTIFIED AS THE REQUIREMENT SPECIFICATION LANGUAGE/REQUIREMENT SPECIFICATION ANALYZER (RSL/RSA). THE DISCOVERY, WHICH WAS COMPLETED 1 YEAR AHEAD OF SCHEDULE, WON A SILVER MEDAL AT THE FIRST BEIJING INTERNATIONAL TRADE FAIR. A KEY RESEARCH PROJECT UNDER THE 7TH 5-YEAR PLAN, IT ALSO PASSED ITS TECHNICAL APPRAISAL CONDUCTED JOINTLY BY CAS AND THE MINISTRY OF MACHINE BUILDING AND ELECTRONICS

UNCLASSIFIED

UNCLASSIFIED

* * * * * SG1J * * * * *

SEQUENCE NR: CIF90005966 USER- [REDACTED] ID: 43070-92APR28/10.52.06/A01

INDUSTRY (MMBEI).

NATIONAL DEFENSE S AND T UNIVERSITY DEVELOPS SYSTEMS ENGINEERING TEACHING SIMULATOR (LIBERATION ARMY DAILY, LAD, 13 NOV; AND STD, 11 NOV). THE SYSTEM IS A MAJOR PLA RESEARCH PROJECT UNDER THE 7TH 5-YEAR PLAN. THIS MODERN COMPUTER AIDED TEACHING SYSTEM, WHICH PASSED ITS APPRAISAL IN EARLY NOV, IS SUITABLE FOR CLASSROOM INSTRUCTION, GUIDANCE, EXPERIMENTATION, DEMONSTRATIONS, AND TEACHING MANAGEMENT.

ULTRAHIGH FREQUENCY (UHF) DOPPLER ANEMOMETRIC WIND MEASUREMENT RADAR SYSTEM PASSES TECHNICAL APPRAISAL (STD, 14 NOV; PD, 15 NOV; AND CD, 29 NOV). THE UHF DOPPLER ANEMOMETRIC RADAR IS A KEY S AND T PROJECT UNDER THE 7TH 5-YEAR PLAN. IT WAS JOINTLY DEVELOPED BY THE CHINESE ACADEMY OF METEOROLOGICAL (MET) SCIENCE'S ATMOSPHERIC RI, THE MINISTRY OF AEROSPACE INDUSTRY'S (MASI) 23 RI, AND THE BEIJING INSTITUTE OF RADIO MEASUREMENT. THE RADAR RECENTLY PASSED ITS TECHNICAL APPRAISAL BY A COMMITTEE OF MET AND RADAR EXPERTS AT ITS SITE IN BEIJING'S DAXING COUNTY. THIS WIND PROFILING RADAR EMITS NARROW ANTENNA BEAMS AT SPECIFIED HEIGHTS AND DIRECTIONS TO MEASURE THREE RADIAL WIND VECTORS AND COMPARE THEM WITH THE DOPPLER SPECTRA. THE DATA IS TRANSFERRED AUTOMATICALLY TO A REMOTELY LOCATED COMPUTER AND TERMINAL WHERE IT IS STORED ON DISKS OR TAPES. THE SYSTEM IS SIMPLE TO OPERATE AND MAINTAIN, ONLY REQUIRING ONE OPERATOR. THE RADAR CAN MEASURE WIND SPEED AND DIRECTION 5 TIMES FASTER THAN THE TRADITIONAL BALLOON TESTING METHOD. THE SYSTEM'S COMPUTER CAN OPERATE AS FAR AWAY AS 30 MILES FROM THE RADAR. 99 PERCENT OF THE RADAR'S PARTS WERE MADE IN CHINA. THE SYSTEM HAS APPLICATION IN MILITARY, AEROSPACE, AND CIVIL AVIATION SECTORS.

MINISTRY OF AEROSPACE INDUSTRY. HOUMA CABLE WORKS EMERGENCY PRODUCTION OF SPECIAL CABLE PREVENTS DELAY IN SATELLITE LAUNCH (LAD, 2 NOV). THE FACTORY UNDER THE MINISTRY OF POSTS AND TELECOMMUNICATIONS (MPT) TOOK ONLY 23 DAYS TO PRODUCE A SPECIAL CABLE FOR A SATELLITE LAUNCHING CENTER TO AVOID DELAY IN A KEY DEFENSE PROJECT TEST. IN SEP 89, OVER 10 KM OF CABLE AT THE CENTER WAS ACCIDENTALLY DAMAGED. WITHOUT TIMELY REPLACEMENT OF THE CABLE, LAUNCH COMMAND TRANSMISSIONS, COMPUTER DATA TRANSMISSIONS, DATA DETERMINATION, AND INTEGRATED TIME SERVICE SIGNALING WOULD HAVE BEEN AFFECTED.

MASI'S LIGHT GAS TURBINE DEVELOPMENT CENTER TO COMMENCE FULL PRODUCTION OF FT-8 GAS TURBINES IN 1990 (TKP, 3 NOV). THE CENTER HAS DEVELOPED THE NEW ENGINE IN COOPERATION WITH THE U.S. PRATT WHITNEY COMPANY, AND HOPES TO SELL IT TO PROSPECTIVE BUYERS IN SOUTHEAST ASIA. THE FACTORY ALREADY PRODUCES THE WJ6G, WP6G, WZ6G, WJ5G, WZ5G, AND WS9G ENGINES. IT IS ALSO PLANNING TO IMPORT TECHNOLOGY TO MANUFACTURE MEDIUM SIZE GAS TURBINES.

UNCLASSIFIED

* * * * * SG1J * * * * *

SEQUENCE NR: CIF90005966 USER- [REDACTED] ID: 43070-92APR28/10.52.06/A01

CHENGDU AIRCRAFT FACTORY TO SIGN CONTRACTS WITH THAILAND AND THE MIDDLE EAST TO EXPORT OVER 100 F-7 FIGHTERS (HONG KONG WHEN WEI PO, WWP, 6 NOV). THE CONTRACTS WILL BE SIGNED AT THE END OF NOV OR EARLY DEC 89, WITH DELIVERIES BEGINNING IN 1992. THE FACTORY IS NOW COOPERATING WITH THE 611TH AIRCRAFT RI TO DESIGN A NEW TYPE FIGHTER AIRCRAFT.

CHINA HELICOPTER INDUSTRY CORP SEEKS FOREIGN ASSISTANCE IN DEVELOPING NEW CHINESE HELICOPTERS (SOUTH CHINA MORNING POST, SCMP AND CD, 6 NOV). (CHEN) BAOQI, CORP GENERAL MANAGER, CLAIMED HE IS SEEKING FOREIGN HELP IN A 26.81 MILLION DOLLAR PROJECT TO BUILD A 2-TON, 5-SEAT HELICOPTER TO BE PUT IN SERVICE IN 1993. THE HELICOPTER WOULD SERVE MILITARY AND CIVILIAN PURPOSES FOR RECONNAISSANCE, COMMUNICATIONS, FOREST PROTECTION AND SURVEYING. A 6-MONTH FEASIBILITY STUDY WAS CONDUCTED ON THE AIRCRAFT IN 1988 WITH THE HELP OF FRANCE'S AEROSPATIALE AND AUSTRALIA'S AEROSPACE TECHNOLOGIES. THE JINGDEZHEN AIRCRAFT MANUFACTURING PLANT IS CURRENTLY BUILDING TWO PROTOTYPE 13-TON, 27-PASSENGER HELICOPTERS CAPABLE OF LANDING ON LAND OR SEA. THE CORP IS ALSO DESIGNING A 1-TON AND AN 8-TON HELICOPTER. THE COMPANY IS CURRENTLY BUILDING THE Z-9, FRENCH DESIGNED DAUPHIN HELICOPTER. HOWEVER, ONLY 10 WERE BUILT DURING 1988 AND THEIR QUALITY WAS CONSIDERED LOW. (NOTE: SEE 1-15 JAN, 1-15 APR, AND 1-15 OCT 89 DSTI REPORTS FOR MORE DATA ON CHINESE HELICOPTERS).

SHIPBUILDING INDUSTRY. SHANGHAI'S ZHONGHUA SHIPYARD LAUNCHES RAILWAY FERRY BRIDGE (CD, 6 NOV). THE FERRY, WHICH IS THE LARGEST EVER BUILT IN CHINA, IS ONE OF TWO ORDERED BY THE SHANGHAI RAILWAY BUREAU.

DALIAN SHIPYARD BUILDS OIL TANKERS FOR NORWAY AND SWEDEN (NCNA, 10 NOV). THE SHIPYARD IS BUILDING AN 80,000 TON TANKER FOR NORWAY AND A 30,000 TON TANKER FOR SWEDEN. THE 80,000 TON VESSEL IS THE LARGEST EVER BUILT IN CHINA. IT WILL BE EQUIPPED WITH A 9,560 KILOWATT (KW) DIESEL ENGINE.

MINISTRY OF MACHINE BUILDING/ELECTRONICS INDUSTRY. HONG KONG SPECIALIST SUPPORTS BEIJING'S EFFORTS TO RECENTRALIZE ITS CAR MAKING INDUSTRY (SCMP, 2 NOV). IAN STONE, DIRECTOR OF ATC INTERNATIONAL, TOLD THE CHINA MARKET REASSESSMENT SEMINAR, WHICH WAS SPONSORED BY THE INSTITUTE FOR INTERNATIONAL RESEARCH, THAT CHINA HAS OVER 1,000 VEHICLE MANUFACTURERS AND NONE PRODUCED VEHICLES OF SUFFICIENT QUALITY TO COMPETE IN THE INTERNATIONAL MARKET. HE EXPRESSED SUPPORT FOR BEIJING'S DECISION TO CHANNEL RESOURCES AND FUNDS TO ITS BIG THREE AND SMALL THREE AUTOMOTIVE PRODUCERS. HOWEVER, HE SPECULATED THAT CHINA WOULD HAVE DIFFICULTY CLOSING SMALL, INEFFICIENT PRODUCERS BECAUSE LOCAL GOVERNMENTS WOULD RESIST THESE EFFORTS EVEN THOUGH IT WAS GOOD FOR THE INDUSTRY AS A WHOLE. (NOTE: SEE 16-31 JUL 89 DSTI REPORT FOR MORE DATA).

UNCLASSIFIED

* * * * * SG1J * * * * *

SEQUENCE NR: CIF90005966 USER- [REDACTED] ID: 43070-92APR28/10.52.06/A01

VOLKSWAGEN ANNOUNCES PLANS TO EXPAND PRODUCTION IN CHINA AT AUTOMOTIVE CONFERENCE (NCNA, 4 NOV; AND CD, 7 AND 13 NOV). VOLKSWAGEN TOLD THE FIFTH INTERNATIONAL PACIFIC CONFERENCE ON AUTOMOTIVE ENGINEERING THAT IT PLANNED TO INCREASE PRODUCTION AT BOTH ITS SHANGHAI SANTANA AND CHANGCHUN AUDI 100 PLANTS. THESE TWO PLANTS WILL ALSO PROVIDE UP TO 70,000 AUTOMOBILE ENGINES FOR EXPORT TO VOLKSWAGEN PLANTS IN GERMANY. MMBEI MINISTER (ZOU) JIAHUA TOLD THE CONFERENCE THAT CHINA IS SEEKING COOPERATION WITH FOREIGN AUTO MAKERS TO DEVELOP ITS AUTOMOTIVE INDUSTRY.

GIANT H3/36 TOWER CRANE PRODUCED IN SICHUAN WITH TECHNOLOGY TRANSFERRED FROM FRANCE (PD, 10 NOV). THE NEW CRANE HAS A CAPACITY OF 12 TONS AND CAN RAISE OBJECTS FROM HEIGHTS AS LOW AS 2 METERS (M) TO AS HIGH AS 305M. 100 PERCENT OF ITS PARTS WERE MADE IN CHINA. (NOTE: SEE 1-15 OCT 89 DSTI REPORT FOR MORE DATA).

SINO AMERICAN JOINT VENTURE (JV) TO MANUFACTURE METAL BEARINGS SET UP IN SHANGHAI (CD, 13 NOV). THE U.S. GENERAL BEARING CORP AND THE SHANGHAI ROLLER BEARING PLANT SET UP THE JV WITH AN INVESTMENT OF 9.9 MILLION DOLLARS. THE JV IS TO PRODUCE 600,000 BEARINGS BY THE END OF 1989, AND 10 MILLION BEARINGS BY 1991. ALL OF THE BEARINGS PRODUCED WILL BE SOLD IN THE U.S.

QING LING AUTOMOTIVE PLANT IN CHONGQING REPORTS DOUBLING AUTO SALES OVER 1988 (CD, 13 NOV). THIS AUTOMOTIVE JV WITH THE JAPANESE ISUZU COMPANY HAS REPORTED A DRAMATIC INCREASE IN TRUCK SALES DURING THE FIRST HALF OF 1989, DESPITE PROBLEMS ENCOUNTERED IN THE REST OF CHINA'S AUTOMOTIVE INDUSTRY. THE JV IS OPERATING WITH A ONE MILLION DOLLAR INVESTMENT FROM JAPAN AND IMPORTS 55 PERCENT OF ITS TRUCK PARTS FROM ISUZU. HOWEVER, EFFICIENT MANAGEMENT OF THE PLANT HAS ALLOWED IT TO SELL ITS PRODUCTS DOMESTICALLY AT COMPETITIVE PRICES.

COMMUNICATIONS, COMMAND, AND CONTROL DEVELOPMENTS. BEIJING TELECOMMUNICATIONS BUREAU SIGNS CONTRACT WITH FRENCH FIRM FOR 200,000 PROGRAM CONTROLLED TELEPHONES (WWP, 2 NOV). WWP DOES NOT INDICATE WHICH FRENCH FIRM RECEIVED THE CONTRACT; HOWEVER, THE FRENCH COMPANY CAP SESA SET UP INTERNATIONAL COMMUNICATIONS CIRCUITS IN BEIJING IN FEB 89 (1-15 MAR 89 DSTI REPORT).

COSTIND'S COMPLETELY AUTOMATED COMPUTER PROGRAMMED BROADCAST TRANSMITTER ENTERS MASS PRODUCTION (STD, 3 NOV). THE TRANSMITTER WAS DEVELOPED BY COSTIND'S COMMAND SKILL INSTITUTE AND HAS COMPLETED A TRIAL YEAR OF OPERATIONS WITHOUT A SINGLE ERROR. THE NEW SYSTEM PERMITS THE USE OF AN ELECTRIC SIGNAL TO REPLACE MANUAL SWITCH AND KEYBOARD OPERATIONS. THE TRANSMITTER HAS FOUR OPERATIONAL FEATURES: AUTOMATIC PROGRAMMED BROADCASTS, PROGRAMMED INPUT, MANUAL TIMING, AND MANUAL OPERATIONS.

SHANGHAI QIMING SOFTWARE COMPANY DEVELOPS DEVICE TO CURE BALL TYPE

UNCLASSIFIED

* * * * *

SG1J

SEQUENCE NR: CIF90005966 USER- [REDACTED] ID: 43070-92APR28/10.52.06/A01

COMPUTER VIRUS (NCNA, 4 AND 15 NOV). THE QIMING SOFTWARE COMPANY IS A SINO JAPANESE JV LOCATED IN THE CAOHEJING NEW TECHNOLOGY DEVELOPMENT ZONE IN SHANGHAI. (LIU) YONGSHEN, AN ENGINEER AT THE COMPANY, INVENTED A DEVICE THAT CAN DETECT AND CLEAR THE BALL TYPE VIRUS IN A MICROCOMPUTER. THE MINISTRY OF PUBLIC SECURITY HAS DISCOVERED THAT ABOUT 10 PERCENT OF CHINA'S 300,000 COMPUTERS ARE INFECTED BY THIS VIRUS. THE VIRUS DOES NOT ERASE THE COMPUTER'S MEMORY, BUT CAN INTERFERE WITH ITS OPERATIONS. IN ADDITION TO THE BALL TYPE VIRUS, MARIJUANA AND SHELL VIRUS HAVE ALSO BEEN DETECTED IN CHINA.

MPT ANNOUNCES THAT CHINA WILL MAKE LARGE INVESTMENTS IN TELECOMMUNICATIONS CONSTRUCTION (CMEJ, 7 NOV). MPT PLANS TO EXPAND ITS MICROWAVE, OPTICAL FIBER, AND SATELLITE LONG DISTANCE COMMUNICATIONS NETWORKS. U.S. MADE EQUIPMENT WILL BE IMPORTED TO UPGRADE TEN TRUNK COMMUNICATIONS LINES. ANOTHER FOUR SATELLITE STATIONS ARE UNDER CONSTRUCTION, IN ADDITION TO THE FIVE ALREADY IN OPERATION, AND ANOTHER TEN ARE PLANNED IN MAJOR CITIES SUCH AS SHANGHAI AND KUNMING.

U.S. COMMUNICATIONS FIRM MOLEX SETS UP JV PLANTS IN HONG KONG AND GUANGDONG PROVINCE (WWP, 7 NOV). MOLEX HAS INVESTED HKD 100 MILLION IN THE TWO FACTORIES WHICH WILL PRODUCE CONNECTORS. THE GUANGDONG FACTORY IS LOCATED IN SHILLONG /GEO COORD: 2306N/11351E/, COVERS 30,000M SQUARE AND HAS A WORK FORCE OF OVER 150, WHICH IT EXPECTS TO DOUBLE DURING 1990.

LARGE CAPACITY DIGITAL MICROWAVE CIRCUIT BETWEEN BEIJING AND SHANGHAI BEGINS LIMITED OPERATIONS (BEIJING RADIO, 12 NOV). THE 1,718 KM CIRCUIT PASSES THROUGH TIANJIN MUNICIPALITY, HEBEI, SHANDONG, ANHUI, AND JIANGSU PROVINCES. IT HAS 46 MICROWAVE RELAY STATIONS AND IS CAPABLE OF HANDLING TELEPHONE, TELEGRAPH, AND DIGITAL TV AND RADIO BROADCASTS.

CAS INSTITUTE SETS UP TRANSNATIONAL COMPANY TO EXPORT CHINESE COMPUTER PRODUCTS (CHINA NEWS SERVICE, CNS AND NCNA, 14 NOV). CAS PRESIDENT (ZHOU) GUANGZHOU HAS ANNOUNCED THAT THE INSTITUTE OF COMPUTER TECHNOLOGY HAS SET UP THE LEGEND COMPUTER COMPANY AS A JV IN COOPERATION WITH A HONG KONG COMPANY TO MARKET ITS LIANXIANG-286 COMPUTERS IN EUROPE AND AMERICA. THE NEW JV WAS ESTABLISHED WITH AN INITIAL INVESTMENT OF HKD 900,000.

CHINA TO REPLACE 4-DIGIT STANDARD TELEGRAPHIC CODE WITH 5-STROKE CHINESE COMPUTER CHARACTERS (NCNA, 15 NOV). THE DECISION WAS ANNOUNCED AT A SYMPOSIUM ON APPLICATION OF WANG TECHNOLOGY IN POSTS AND TELECOMMUNICATIONS, WHICH BEGAN IN BEIJING ON 15 NOV. THE 5-STROKE COMPUTER CHARACTERS WU BI ZI XING /STC: 0063/4581/1316/0992/ WERE INVENTED BY CHINESE COMPUTER EXPERT (WANG) YONGMIN. THE NEW SYSTEM WILL GREATLY INCREASE COMMUNICATIONS

* * * * *

UNCLASSIFIED

* * * * *

UNCLASSIFIED

* * * * *

SG1J

SEQUENCE NR: CIF90005966 USER- [REDACTED] ID: 43070-92APR28/10.52.06/A01

EFFICIENCY BY ALLOWING BOTH WORDS AND PHRASES IN CHINESE TO BE INPUT TO A COMPUTER.

OMNI BEARING AUTOMATIC MILITARY TELEPHONE NETWORK SET UP IN XIAN (LAD, 15 NOV). THE ENGINEERING WORK TO SET UP THE 10,000 LINE TELEPHONE NETWORK TOOK 3 YEARS TO COMPLETE. IT ALLOWS ALL TROOP UNITS IN THE XIAN AREA ACCESS TO FIVE TELEPHONE STATIONS EQUIPPED WITH ADVANCED TECHNICAL EQUIPMENT.

NUCLEAR/ELECTRIC POWER INDUSTRY. CHINESE DISCOVER METHOD OF SLOWING SILTING OF HYDROPOWER STATION RESERVOIRS (CD, 2 NOV). CHINESE RESEARCHERS EXPLAINED METHODS USED AT THE SANMENXIA AND GEZHOUBA POWER STATIONS TO AN INTERNATIONAL SYMPOSIUM ON RIVER SEDIMENTATION HELD IN THE FRAGRANT HILL HOTEL IN BEIJING. THE RESEARCHERS DISCOVERED METHODS OF PREDICTING SILT MOVEMENT AND THEREBY PREVENTING OR CONTROLLING SOIL EROSION.

PEOPLE'S ARMED POLICE (PAP) SECOND HYDROPOWER GENERAL UNIT COMPLETES DAMMING OF GANJIANG RIVER IN JIANGXI PROVINCE (LAD, 4 NOV). THE PAP UNIT BUILT THE DAM AS PART OF THE WAN'AN HYDROPOWER STATION /GEO COORD: 2627N/11446E/, A KEY PROJECT UNDER THE 6TH AND 7TH 5-YEAR PLANS. PHASE TWO CUT OFF OF RIVER FLOW WAS ACCOMPLISHED IN ONE OPERATION.

ENERGY EXPERTS SUGGEST MORE EFFICIENT METHODS OF POWER USAGE IN SHANGHAI (CD, 6 NOV). THE EXPERTS IDENTIFIED FOUR PROBLEM AREAS IN ENERGY SUPPLY IN THE CITY: (1) INADEQUATE SUPPLIES OF COAL AND OIL; (2) INADEQUATE POWER TRANSMISSION FACILITIES; (3) ENERGY WASTE DUE TO INEFFICIENT INDUSTRIAL BOILERS; AND (4) DENSE POPULATION AND CONCENTRATION OF POWER LOADS IN THE CITY. THEY RECOMMEND THAT THE CITY INCLUDE STUDY OF METHODS TO REDUCE ENERGY WASTE AS PART OF THE 8TH 5-YEAR PLAN. FOR EXAMPLE, THE CITY'S 5,000 PLUS INDUSTRIAL BOILERS SHOULD HAVE THEIR EFFICIENCY RAISED FROM 65 TO 70 PERCENT; AND THERE SHOULD BE BETTER ALLOCATION OF ENERGY RESOURCES BY THE STATE.

ULTRAHIGH TENSION 2-WAY POWER TRANSMISSION LINE OPENS BETWEEN LONGYANGXIA AND QINLING POWER STATIONS (NCNA, 6 NOV). THE 1,000 KM LONG LINE COST 73.63 MILLION YUAN TO BUILD AND HAS A CAPACITY OF 400 MEGAWATTS (MW). IT IS DESIGNED TO ALLEVIATE ENERGY SHORTAGES IN NORTHWEST CHINA'S SHAANXI, GANSU, AND QINGHAI PROVINCES.

LANZHOU HEAVY ION PLASMA ACCELERATOR PASSES STATE APPRAISAL AND COMMENCES OPERATIONS (TKP AND NCNA, 10 NOV). THE ACCELERATOR CONSISTS OF A SOURCE ACCELERATOR, A MAIN ACCELERATOR, EIGHT EXPERIMENTAL TERMINALS AND BACK AND FORTH BEAM TRANSPORT LINES. IT WILL BE USED PRIMARILY FOR HEAVY ION BEAM AND NUCLEAR PHYSICS RESEARCH. IT PASSED ITS ACCEPTANCE TEST BY THE NATIONAL APPRAISAL COMMITTEE ON 9 NOV. (NOTE: FOR MORE DATA ON THE ACCELERATOR SEE

* * * * *

UNCLASSIFIED

PAGE

47

* * * * *

UNCLASSIFIED

* * * * * SG1J * * * * *

SEQUENCE NR: CIF90005966 USER- [REDACTED] ID: 43070-92APR28/10.52.06/A01

1-15 DEC 88 DSTI REPORT).

PROSPECTING WORK FOR SECOND PHASE OF QINSHAN NUCLEAR POWER STATION UNDERWAY (CNS, 11 NOV). THE SECOND PHASE PROJECT CALLS FOR A NUCLEAR REACTOR WITH A CAPACITY OF 600 MW. DESIGN AND SERVICES CONTRACTS FOR THE SECOND PHASE HAVE BEEN SIGNED AND DESIGN WORK IS BEING CARRIED OUT. THE CHINA GENERAL NUCLEAR INDUSTRIAL CORP IS NEGOTIATING WITH FRANCE AND WEST GERMANY TO PURCHASE TECHNOLOGY AND COMPONENTS FOR THE PROJECT.

QINGHUA UNIVERSITY'S 5 MW LOW PRESSURE NUCLEAR POWER REACTOR BEGINS TO PROVIDE CENTRAL HEATING FOR BEIJING (NCNA, 11 NOV; AND PD, 12 NOV). THE REACTOR, LOCATED IN A NORTHEAST SUBURB OF BEIJING WILL PRODUCE CHEAP HEAT FOR THE CITY. IT IS CHINA'S FIRST REACTOR USING PRESSURE AND SAFETY SHELL TYPE CONSTRUCTION AND AN INTERMEDIATE ISOLATION LOOP. (NOTE: FOR MORE DATA SEE 15-28 FEB 89 DSTI REPORT).

ANKANG HYDROPOWER STATION IN SHANNXI PROVINCE TO BEGIN OPERATING FIRST 200 MW GENERATOR IN 1990 (NCNA, 14 NOV). A 120M HIGH, 521M LONG CONCRETE DAM HAS BEEN COMPLETED ACROSS THE HANJIANG RIVER IN DASHIYEI CANYON /GEO COORD: 3242N/10912E/ FORMING A RESERVOIR WITH A CAPACITY OF 2.58 BILLION M CUBE. THE PROJECT, WHICH COST 2.1 BILLION YUAN TO CONSTRUCT, CALLS FOR THE INSTALLATION OF FOUR 200 MW TURBOGENERATORS, MAKING IT THE LARGEST IN THE PROVINCE. A 300 KM HIGH TENSION POWER LINE IS BEING ERECTED TO CONNECT ANKANG WITH THE NORTH WEST CHINA POWER GRID.

MMEI ANNOUNCES DEVELOPMENT OF ENERGY SAVING LIGHT BULBS (NCNA, 14 NOV). CHINA HAS DEVELOPED AN 11-WATT LIGHT BULB, MADE OF RARE EARTH, SODIUM AND OTHER NEW MATERIALS, WHICH PRODUCES AS MUCH LIGHT AS A 60 WATT BULB. IT HOPES TO DISCOVER OTHER ENERGY SAVING DEVICES THROUGH USE OF VACUUM, MICROELECTRONICS, GLASS AND CERAMICS TECHNOLOGY.

STATE COUNCILOR WARNS THAT CHINA'S DEVELOPMENT IS BEING DRAWN BACKWARDS BY THE WORSENING SHORTAGE OF ENERGY (CD, 15 NOV). ZOU JIAHUA IDENTIFIED THREE MAIN REASONS FOR THE MOUNTING GAP BETWEEN ENERGY DEMAND AND SUPPLY: (1) CHINA'S OVERRAPID ECONOMIC DEVELOPMENT; (2) THE DISPROPORTIONATE GROWTH OF PROCESSING AND ENERGY INDUSTRIES; AND (3) CHINA'S VERY LOW POWER EFFICIENCY. CHINA IS SHORT 30 MILLION TONS OF COAL, 5 MILLION TONS OF OIL, AND 50 BILLION KW OF ELECTRICITY ANNUALLY. ENERGY SHORTAGES ARE REDUCING CHINA'S PRODUCTION CAPACITY BY 20 TO 30 PERCENT PER YEAR. HE PREDICTED THAT THE COUNTRY'S ENERGY SHORTAGES WOULD NOT BE ALLEVIATED UNTIL THE END OF THE CENTURY.

MEDICAL SCIENCE. LEADING CHINESE VIROLOGIST DISCOVERS SIMPLE METHOD FOR DETECTING AIDS (CD, 1 NOV). PROFESSOR (ZENG) YI, DIRECTOR OF THE AIDS RESEARCH AND TESTING CENTER UNDER THE CHINESE ACADEMY OF

UNCLASSIFIED

* * * * * SG1J * * * * *

SEQUENCE NR: CIF90005966 USER- [REDACTED] ID: 43070-92APR28/10.52.06/A01

PREVENTIVE MEDICINE, USES A DROP OF REAGENT ADDED BLOOD FROM A PATIENT'S EAR AND AN ORDINARY MICROSCOPE TO CONDUCT THIS TEST. THE PROFESSOR USED THIS METHOD TO TEST PATIENTS IN AFRICA WITH VERY ACCURATE RESULTS.

CHINA MEDICAL SCIENCE UNIVERSITY IN SHENYANG ACHIEVES HIGH SUCCESS RATE IN TREATING STOMACH CANCER (CD, 2 NOV). THE UNIVERSITY'S MEDICAL RESEARCH CENTER HAS DETECTED MORE THAN 1,400 CASES OF STOMACH CANCER IN IT EARLY STAGES AND HAS HAD A 58.8 PERCENT SUCCESS RATE IN TREATING THESE PATIENTS. IT HAS ALSO IMPROVED TREATMENT OF STOMACH CANCER IN MIDDLE AND LATE STAGES.

NEW CISA2B3 BLOOD TYPE DISCOVERED IN CHANGCHUN (CD, 7 NOV). THE NEW BLOOD TYPE WAS IDENTIFIED BY THE BLOOD DONOR CENTER IN CHANGCHUN, JILIN PROVINCE. IT CAME FROM ONE OF ITS BLOOD DONORS.

REPORTS OF NEGLECT AND INEFFICIENCY IN CHINA'S HOSPITALS REACHING ALARMING PROPORTIONS (CD, 7 NOV). THE ARTICLE PROVIDES EXAMPLES OF CARELESSNESS AND UNPROFESSIONALISM ON THE PART OF HOSPITAL STAFFS. A PATIENT SUFFERING FROM ANAL FISTULA DIED WHEN A HOSPITAL LABORATORY ACCIDENTALLY PUT POISON IN HIS MEDICINE INSTEAD OF THE PRESCRIBED PILLS. SOME PATIENTS HAVE HAD WATER OR KEROSENE INJECTED INTO THEIR VEINS. A PATIENT IN HIS 50'S HAD TO WAIT 5 HOURS AFTER RECEIVING ANESTHESIA BEFORE A SURGICAL OPERATION BEGAN. SOME DOCTORS WILL TRY ANY METHOD TO GET MONEY OR GIFTS FROM PATIENTS; EVEN DEMANDING A BANQUET FROM FAMILIES BEFORE THEY TREAT A FAMILY MEMBER. THE MAIN PROBLEMS ARE A LACK OF PROFESSIONAL ETHICS, INADEQUATE TRAINING OF ADMINISTRATIVE STAFFS, AND A LACK OF SUFFICIENT FUNDS FROM THE GOVERNMENT.

NEW ANTICANCER DRUG DEVELOPED FROM TRADITIONAL CHINESE MEDICINE APPROVED FOR USE (CD, 13 NOV). THE DRUG WAS JOINTLY DEVELOPED BY THE JILIN ANTICANCER ASSOCIATION'S CHANGBAISHAN PHARMACEUTICAL INSTITUTE, THE TIANJIN INSTITUTE OF MEDICAL AND PHARMACEUTICAL SCIENCES, AND THE BEIJING GUANGANMEN HOSPITAL UNDER THE CHINA INSTITUTE OF TRADITIONAL MEDICINES. 349 OF 807 PATIENTS WITH CARCINOMA OF THE STOMACH OR ESOPHAGUS TREATED WITH THIS DRUG IMPROVED. THE NEW MEDICINE, CALLED TIANXIAN, IS A KEY RESEARCH PROJECT UNDER THE 7TH 5-YEAR PLAN.

CHINESE SCIENTISTS DISCOVER DEVICE WHICH CAN REDUCE THE RISK OF CANCER BY PURIFYING DRINKING WATER (CD, 15 NOV). SENIOR DOCTOR (LIU) MOZHUANG OF THE HEBEI PROVINCIAL ACADEMY OF MEDICAL SCIENCES AND RESEARCH FELLOW (YAO) XIUREN OF THE CHINESE ACADEMY OF GEOLOGICAL SCIENCES DISCOVERED THAT THE INCIDENCE OF CARCINOMA OF THE ESOPHAGUS IN HENAN VILLAGES WAS LESS WHEN THE VILLAGERS GOT THEIR DRINKING WATER FROM GRAVEL SHAFTED WELLS. THEY ISOLATED MINERALS IN THE GRAVEL WHICH WERE FOUND TO INHIBIT THE INCIDENCE OF CANCER. FROM THIS INFORMATION, THEY PRODUCE A DEVICE CONSISTING OF

UNCLASSIFIED

* * * * * SG1J * * * * *

SEQUENCE NR: CIF90005966 USER- [REDACTED] ID: 43070-92APR28/10.52.06/A01

A CONTAINER, A BASKET, AND A CAREFUL MIX OF MINERALS.

PLA SERVICES AND ARMS R-AND-D ACHIEVEMENTS. GENERAL LOGISTICS DEPARTMENT (GLD) REPORTS PROGRESS IN STUDYING LOGISTICS DEVELOPMENT OF FOREIGN ARMIES (LAD, 3 NOV). (ZONG) SHUNLIU, GLD DEPUTY DIRECTOR, TOLD A LOGISTICS SYMPOSIUM MEETING IN BEIJING THAT THE PLA HAD MADE GOOD PROGRESS IN ITS STUDIES OF FOREIGN LOGISTICS CONCEPTS. THE SYMPOSIUM MET TO ANALYZE DEVELOPMENT OF LOGISTICS EQUIPMENT IN FOREIGN ARMIES. 29 PAPERS PRESENTED AT THE SYMPOSIUM WERE SINGLED OUT FOR THEIR EXCELLENT QUALITIES.

ARMY AVIATION UNITS REPORT COMPLETING 20 SCIENTIFIC RESEARCH PROJECTS SINCE BEING FOUNDED 2 YEARS AGO (PD, 4 AND 7 NOV). AMONG THE R-AND-D PROJECTS COMPLETED ARE: (1) AN AUXILIARY FUEL TANK WHICH INCREASED ITS RANGE BY 50 PERCENT; (2) A MOVEABLE TARGET FOR SIMULATED AND LIVE ANTITANK FIRING DRILL FROM AN ARMED HELICOPTER; AND (3) AN AIRBORNE COMMUNICATIONS AND NAVIGATION STATION, WHICH OPTIMIZES HELICOPTER TACTICAL AND TECHNICAL PERFORMANCE, FOR FIELD OPERATIONS. THESE PROJECTS WERE COMPLETED WHILE THE UNITS CARRIED OUT ORGANIZATIONAL AND TRAINING WORK.

FOURTH MILITARY MEDICAL UNIVERSITY LECTURER DEVELOPS PORTABLE CHEMICAL OXYGEN GENERATOR (STD, 6 NOV). (LI) BINGLIN, FROM THE UNIVERSITY IN XIAN, DEVELOPED THE DEVICE WHICH WEIGHS ONLY 1.5 KILOGRAMS (KG) AND COSTS LESS THAN 100 YUAN TO MAKE. IT PRODUCES OXYGEN FROM WATER USING A CATALYST, WITHOUT THE USE OF ELECTRICITY, IN LESS THAN ONE MINUTE. THE OPERATION, WHICH CAN BE REPEATED CONTINUOUSLY PRODUCES 30 TO 80 LITERS OF OXYGEN OF 99.98 PERCENT PURITY. THE DEVICE, WHICH RECENTLY PASSED TECHNICAL APPRAISAL, IS ESPECIALLY SUITED FOR USE OF FIELD UNITS, BASIC LEVEL HEALTH UNITS, AND ON FAMILY EXCURSIONS.

PLA ARMOR CORPS TECHNICAL SCHOOL DEVELOPS ENGINE TROUBLE SHOOTING SIMULATOR FOR TANK AND ARMORED VEHICLE MECHANICS (STD, 6 NOV). EXPERTS CLAIM THE SYSTEM CAN BE APPLIED TO DIAGNOSE PROBLEMS IN NUMEROUS TYPES OF FOREIGN AND DOMESTIC INTERNAL COMBUSTION ENGINES. THE NEW SIMULATOR ALLOWS ONE INSTRUCTOR TO COMPLETE TRAINING IN 4 HOURS THAT IT USE TO TAKE THREE INSTRUCTORS 3 DAYS TO COMPLETE. THE SYSTEM RECENTLY PASSED ITS TECHNICAL APPRAISAL IN CHANGCHUN AND HAS NOW ENTERED TRIAL PRODUCTION.

UNIDENTIFIED NAVAL AIR FORCE UNIT DEVELOPS MICROCOMPUTER CONTROLLED AIRCRAFT REFUELING SYSTEM (NAVAL AND MERCHANT SHIPS, 8 NOV). THE SYSTEM TRIPLES THE SPEED AT WHICH AN AIRCRAFT CAN BE REFUELED AND HAS FACILITIES TO REFUEL EIGHT AIRCRAFT SIMULTANEOUSLY. IT IS EQUIPPED WITH AN ANTIEXPLOSION ELECTROMAGNETIC VALVE MAKING IT SAFE AND RELIABLE FOR WIDE APPLICATION. THE UNIT HAS ALREADY PUT THE SYSTEM INTO SERVICE.

* * * * *

UNCLASSIFIED

* * * * *

UNCLASSIFIED

* * * * *

SG1J

SEQUENCE NR: CIF90005966 USER- [REDACTED] ID: 43070-92APR28/10.52.06/A01

AIR FORCE ENGINEERING INSTITUTE TRIAL PRODUCES PERMISSIBLE MISSILE FIRING RANGE DISPLAY MECHANISM (STD, 10 NOV). THE DEVICE, WHICH IS DESIGNED FOR USE WITH AIR-TO-AIR MISSILES, COLLECTS DATA THROUGH A TRANSDUCER AND, AFTER COMPUTER PROCESSING, INDICATES THE MAXIMUM PERMISSIBLE ATTACK RANGE ON A DISPLAY LAMP ON THE PILOT'S CONSOLE. A DIFFERENT LAMP WILL ALSO WARN THE PILOT WHEN CONDITIONS ARE UNSUITABLE FOR FIRING THE MISSILE. THE NEW MECHANISM WILL IMPROVE PILOT ABILITY TO ACQUIRE TARGETS AND ENHANCE THE PROFICIENCY OF AIRCRAFT MISSILES.

AN UNIDENTIFIED AIR FORCE RI HAS DEVELOPED AN ANTICOLLISION LASER/RADAR SIMULATOR (STD, 10 NOV). THE DEVICE CONSISTS OF A HOST COMPUTER, A REFLECTIVE TARGET AND A CONTROL BOX. THE EQUIPMENT IS MOUNTED IN A COMPARTMENT SUSPENDED FROM AN OVERHEAD CRANE. WHEN THE COMPARTMENT (WHICH APPARENTLY SIMULATES AN AIRCRAFT OR VEHICLE CABIN) COMES WITHIN A PREDETERMINED DISTANCE OF ANOTHER OBJECT, A SOUND/LIGHT WARNING SIGNAL IS PRODUCED. IF THE COMPARTMENT CONTINUES TO MOVE IN THE SAME DIRECTION AFTER THE WARNING, THE CONTROL BOX WILL ISSUE A BRAKING SIGNAL AT A PREFIXED TIME TO AVOID A COLLISION.

TRANSPORTATION UNIT OF NANJING MR AIR FORCE LOGISTICS DEPARTMENT DEVELOPS VEHICLE STRENGTH AND EXPENDITURE MANAGEMENT SYSTEM (LAD, 15 NOV). UNDER THE NEW SYSTEM, COMPILING OF ANNUAL STATISTICS TAKES ONE PERSON 3 DAYS; WORK THAT USE TO TAKE TWO PERSONS OVER A MONTH TO COMPLETE. THE SYSTEM CAN ALSO BE USED TO MANAGE VEHICLES IN A CIVILIAN ENTERPRISE. THE SYSTEM RECENTLY PASSED ITS TECHNICAL APPRAISAL.

DEFENSE CONFERENCES AND EXHIBITIONS. 5-DAY INTERNATIONAL SYMPOSIUM ON FLAME RETARDANTS SPONSORED BY CHINA ORDNANCE SOCIETY HELD IN BEIJING (NCNA, 1 NOV). SOCIETY CHAIRMAN, (TANG) ZHONGWEN, URGED ATTENDEES TO EXCHANGE ADVANCED FLAME RETARDANT TECHNOLOGY TO AVOID LOSS OF LIFE AND PROPERTY FROM FIRES. 246 PARTICIPANTS FROM 40 DOMESTIC AND FOREIGN AGENCIES ATTENDED THE 1-5 NOV SYMPOSIUM.

THIRD ALL ARMY MILITARY STANDARDIZATION WORK CONFERENCE REPORTS RAPID PROGRESS IN MILITARY STANDARDIZATION (STD, 4 NOV). THE CONFERENCE REVEALED THAT COSTIND AND GLD HAVE SET UP 25 NATIONAL STANDARDIZATION TECHNICAL COMMITTEES AND OVER 80 MILITARY STANDARDIZATION SPECIALIST TEAMS HAVE BEEN ESTABLISHED IN VARIOUS MILITARY ORGANS. THE PLA HAS ALREADY PROMULGATED OVER 1,600 NATIONAL MILITARY TANDARDS, AND MILITARY ORGANS HAVE RELEASED OVER 13,000 MULTIPROFESSION MILITARY STANDARDS.

CHINA'S FIRST NEW TECHNOLOGY AND NEW PRODUCTS FAIR HELD IN GUANGZHOU FROM 8 TO 14 NOV (NCNA, 14 NOV). THE EXHIBITION WAS INTENDED TO DEVELOP DOMESTIC AND INTERNATIONAL MARKETS FOR CHINESE TECHNOLOGY AND TO INTEGRATE RESEARCH AND PRODUCTION ACTIVITIES. FAIR

* * * * *

UNCLASSIFIED

* * * * *

UNCLASSIFIED

* * * * * SG1J * * * * *

SEQUENCE NR: CIF90005966 USER- [REDACTED] ID: 43070-92APR28/10.52.06/A01

ORGANIZERS CLAIM 580 ORGANIZATIONS FROM 29 PROVINCES PARTICIPATED AND OVER 41,000 VISITORS ATTENDED FAIR ACTIVITIES. SCIENTIFIC RI'S WERE THE PRINCIPLE SELLERS AT THE FAIR, WHICH WAS SPONSORED BY THE STATE S AND T COMMISSION.

1989 INTERNATIONAL MEDICAL EQUIPMENT AND FACILITIES EXHIBITION HELD IN SHANGHAI FROM 14 TO 18 NOV (CD, 15 NOV). 80 COMPANIES FROM 17 COUNTRIES DISPLAYED THEIR WARES AT THE SHOW.

EXHIBITION FEATURING ACHIEVEMENTS IN FOREIGN INVESTED ENTERPRISES HELD IN NEW CHINA WORLD TRADE CENTER (CD, 10 AND 15 NOV). BOTH PRIME MINISTER (LI) PENG AND PARTY SECRETARY (JIANG) ZEMIN ATTENDED THE EXHIBITION, WHICH IS THE FIRST TO BE HELD IN THE NEW CENTER. MINISTER OF FOREIGN ECONOMIC RELATIONS AND TRADE, (ZHENG) TUOBIN, TOLD ATTENDEES AT THE FAIR THAT CHINA NOW HAS 20,278 APPROVED FOREIGN FUNDED ENTERPRISES WITH A TOTAL FOREIGN CAPITAL INVESTMENT OF 32.171 BILLION DOLLARS.

DSTI AWARDS AND RECOGNITION. BEIJING HAIDING LEIYIN TECHNICAL CORP. RECEIVES AWARDS FOR CONTRIBUTIONS TO DEFENSE AND AEROSPACE DEVELOPMENTS (STD, 3 NOV). THE COMPANY, WHICH IS LOCATED IN BEIJING'S NEW TECHNOLOGY DEVELOPMENT ZONE, RECEIVED A SECOND CLASS S AND T PROGRESS AWARD IN 1988 FOR ITS 517-SERIES SHIPBORNE EARLY WARNING RADAR. THE RADAR ALSO WON A GOLD PRIZE AT THE 1989 BEIJING INTERNATIONAL TRADE FAIR. THE COMPANY MANUFACTURES HIGH TECH PRODUCTS SUCH AS ELECTRONIC INFORMATION, RADIO MONITORING, REMOTE SENSING AND CONTROL, INDUSTRIAL AND OFFICE AUTOMATION SYSTEMS. IT IS ALSO RESPONSIBLE FOR DEVELOPING THE GWY HIGH PRECISION SERIES POWER SOURCE EQUIPMENT USED IN THE LAUNCH OF THE LONG MARCH II CARRIER ROCKET.

CEREMONY HELD TO MARK THE INTEGRATION OF THE NATIONAL DEFENSE S AND T UNIVERSITY INTO THE PLA'S ACADEMIES AND SCHOOLS SYSTEM (HUNAN DAILY, 6 NOV). THE CEREMONY FEATURED A PASS IN REVIEW HELD BY THE UNIVERSITY'S 2,500 OFFICERS, CADRE, AND STUDENTS IN 25 FORMATIONS. COSTIND CHIEF-OF-STAFF, LT. GEN. (ZHANG) MIN /STC: 1728/2404/, AND DEPUTY POLITICAL DEPARTMENT DIRECTOR, MAJ. GEN. (LIU) ZHONGSHAN /STC: 0491/0022/1472/ OCCUPIED THE REVIEWING STAND. THE UNIVERSITY WAS FOUNDED IN 1953, WHEN IT WAS KNOWN AS THE HARBIN MILITARY ENGINEERING INSTITUTE. IT GAINED ITS NEW NAME IN 1978 WHEN IT WAS MOVED TO CHANGSHA IN HUNAN PROVINCE. SINCE 1978, IT HAS TRAINED OVER 10,000 SPECIALISTS, UNDERGRADUATES, MASTER'S DEGREE AND DOCTORATE RESEARCH FELLOWS. IT IS CURRENTLY ORGANIZED INTO NINE DEPARTMENTS AND FOUR RI'S. THE CMC APPROVED ITS INCORPORATION INTO THE MILITARY ACADEMIES AND SCHOOLS SYSTEM IN JUN 89. IT WILL BE GIVEN THE RESPONSIBILITY FOR TRAINING SENIOR ENGINEERS FOR THE ARMED FORCES.

ASSISTANT ENGINEER RECEIVES ALL ARMY INNOVATION PRIZE FOR DEVELOPING

* * * * *

UNCLASSIFIED

* * * * *

UNCLASSIFIED

* * * * * SG1J * * * * *

SEQUENCE NR: CIF90005966 USER- [REDACTED] ID: 43070-92APR28/10.52.06/A01

SIMULATED ATOMIC BOMB EXPLOSION (LAD, 14 NOV). (XU) XINTIAN DEVELOPED A TYPE OF EXPLOSIVE THAT SIMULATES THE FIREBALL, SHOCK WAVE, MUSHROOM CLOUD, AND RADIATION OF A NUCLEAR BLAST. HOWEVER, IT IS NOT LETHAL OR POISONOUS NOR DOES IT CAUSE POLLUTION; YET IS EASY TO OPERATE AND CHEAP TO BUILD.

FIELD COMMENTS: IT APPEARS THAT THE INTENSE POLITICAL CAMPAIGNING AND ECONOMIC AUSTERITY MEASURES IMPLEMENTED BY BEIJING'S CURRENT HARDLINE LEADERSHIP ARE SERIOUSLY AFFECTING MORALE IN INDUSTRIAL ENTERPRISES. COSTIND DIRECTOR DING HENGGAO HAS WARNED THE DSTI SECTOR THAT CHINA IS FALLING FURTHER BEHIND THE WORLD'S MILITARY POWERS IN THE R-AND-D BUSINESS. WHEN MOST OFFICIALS ARE ADVOCATING TRANSFERRING MILITARY TECHNOLOGY TO THE CIVIL SECTOR, HE IS STRESSING THE REVERSE. THE NATION'S LEADERS ARE EXPERIENCING DIFFICULTY IN IMPLEMENTING ECONOMIC REFORMS BECAUSE MOST MANAGERS ARE EMPLOYING DELAYING TACTICS WHILE THEY MEASURE THE ECONOMIC AND POLITICAL CLIMATE. EVERYONE SEEMS TO BE PUTTING OFF UNTIL TOMORROW WHAT SHOULD HAVE BEEN DONE YESTERDAY. LOCAL GOVERNMENTS ARE ALSO RESISTING EFFORTS TO RECENTRALIZE CONTROL OF ENTERPRISES OR REDUCE INDUSTRIAL INEFFICIENCY.

CHINA IS MOVING AHEAD POSTHASTE TO EQUIP ITS PUBLIC SECURITY FORCES WITH THE MOST ADVANCED RIOT CONTROL EQUIPMENT. THE MULTIPURPOSE VEHICLE DESCRIBED ABOVE IS A FRIGHTENING MONSTER WHICH CAN GIVE DEMONSTRATORS ELECTRIC SHOCKS OR BLIND THEM WITH LASERS. IT ALSO HAS THE EVER PRESENT VIDEO CAMERA AND RECORDER TO IDENTIFY DISSENTERS FOR EVENTUAL ROUNDUP BY THE SECURITY APPARATUS. CERTAINLY, THIS IS NOT THE TYPE OF EQUIPMENT A BENEVOLENT GOVERNMENT WOULD USE TO COMMUNICATE WITH ITS PEOPLE.

CHINESE INDUSTRY STILL HOLDS HIGH EXPECTATIONS FOR FOREIGN TECHNOLOGICAL AND FINANCIAL ASSISTANCE, DESPITE THE RECENT CALLS FOR SELF RELIANCE. THE GAS TURBINE PLANT, WHICH HAS BEEN COOPERATING WITH PRATT AND WHITNEY ON THE FT-8 TURBINE, HOPES THAT IT WILL CONTINUE TO RECEIVE FOREIGN HELP IN BUILDING NAW TYPE JET ENGINES. CHINA'S HELICOPTER INDUSTRY HAS NOT HAD A PROMISING BEGINNING AND IS HEAVILY DEPENDENT ON EXTENSIVE FOREIGN ASSISTANCE IF IT IS EVER TO GET PRODUCTION OFF THE GROUND. CHINA ALSO HOPES TO RECEIVE CONTINUED FOREIGN ASSISTANCE IN BUILDING THE NUCLEAR POWER REACTORS IT URGENTLY NEEDS TO MEET BURGEONING ENERGY DEMANDS. IT MAY FIND SOME GRATIFICATION IN THE RESPONSE OF WEST GERMANY'S VOLKSWAGEN CORP, WHICH PLANS TO INCREASE ITS EFFORT AND INVESTMENT IN CHINA. OF COURSE, RIGHT NOW CHINA REALLY DOES NOT NEED ANY MORE AUTOMOTIVE PRODUCTION TO ADD TO ITS ALREADY ABUNDANT STOCKPILES.

PFN INFORMATION: PART 001

RELATES: XUESEN QIAN IS ASSOCIATED WITH PLA, SOFT SCIENCE RESEARCH

UNCLASSIFIED

* * * * * SG1J * * * * *

SEQUENCE NR: CIF90005966 USER- [REDACTED] ID: 43070-92APR28/10.52.06/A01

CENTER, NATIONAL DEFENSE SCIENCE AND TECHNOLOGY UNIV AND COMMISSION ON SCIENCE, TECHNOLOGY AND INDUSTRY FOR NATIONAL DEFENSE.

PERSON: QIAN, XUESEN
PROTITLE: DOCTOR
PERS CTY: PEOPLES REPUBLIC OF CHINA (CH)

FACILITY: PLA
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)

FACILITY: SOFT SCIENCE RESEARCH CENTER
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)

FACILITY: NATIONAL DEFENSE SCIENCE AND TECHNOLOGY UNIV
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)

FACILITY: COMMISSION ON SCIENCE TECHNOLOGY AND INDUSTRY FOR NATIONAL DEFENSE
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACLDATA: FACILITY NAME EQUATE AVAILABLE

PFN INFORMATION: PART 002

FACILITY: STATE BUREAU OF TECHNOLOGY SUPERVISION
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)

FACILITY: STATE COUNCIL
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)

PFN INFORMATION: PART 003

RELATES: HENGGAO DING IS A MEMBER OF COSTIND. HENGGAO DING IS ASSOCIATED WITH CENTRAL MILITARY COMMISSION.

PERSON: DING, HENGGAO
PROTITLE: DIRECTOR
PERS CTY: PEOPLES REPUBLIC OF CHINA (CH)

PERSON: DING, HENGGAO
PROTITLE: DIRECTOR
PERS CTY: PEOPLES REPUBLIC OF CHINA (CH)

FACILITY: COSTIND
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACLDATA: FACILITY NAME EQUATE AVAILABLE

UNCLASSIFIED

* * * * * SG1J * * * * *

SEQUENCE NR: CIF90005966 USER- [REDACTED] ID: 43070-92APR28/10.52.06/A01

FACILITY: CENTRAL MILITARY COMMISSION
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACLDATA: FACILITY NAME EQUATE AVAILABLE

PFN INFORMATION: PART 004

PERSON: SONG, XIUQIANG 1345-0208-1730
PROTITLE: ENGINEER
PERS CTY: PEOPLES REPUBLIC OF CHINA (CH)

PFN INFORMATION: PART 005

RELATES: LANYING LIN IS A MEMBER OF CHINESE ACAD OF SCIENCE
SEMICONDUCTOR RESEARCH INST.

PERSON: LIN, LANYING
PROTITLE: PROFESSOR
PERS CTY: PEOPLES REPUBLIC OF CHINA (CH)

FACILITY: CHINESE ACAD OF SCIENCE SEMICONDUCTOR RESEARCH INST
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACLDATA: FACILITY NAME EQUATE AVAILABLE

PFN INFORMATION: PART 006

FACILITY: SHANGHAI METALLURGICAL RI
SUPERIOR: CAS
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACL LOC: SHANGHAI

FACILITY: SHANGHAI ORGANIC CHEMICAL RI
SUPERIOR: CAS
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACL LOC: SHANGHAI
FSUBORD: FACILITY SUBORDINATION DATA

PFN INFORMATION: PART 007

FACILITY: CAS SOFTWARE RI
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACLDATA: FACILITY NAME EQUATE AVAILABLE

UNCLASSIFIED

* * * * * SG1J * * * * *

SEQUENCE NR: CIF90005966 USER- [REDACTED] ID: 43070-92APR28/10.52.06/A01

FACILITY: MIN OF MACHINE BUILDING AND ELECTRONICS INDUSTRY
 FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
 FACL DATA: FACILITY NAME EQUATE AVAILABLE

FACILITY: CHINESE ACAD OF METEOROLOGICAL SCIENCE ATMOSPHERIC RI
 FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)

FACILITY: MIN OF AEROSPACE INDUSTRY 23 RI
 FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
 FACL DATA: FACILITY NAME EQUATE AVAILABLE

FACILITY: BEIJING INST OF RADIO MEASUREMENT
 FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)

PFN INFORMATION: PART 008

FACILITY: HOUMA CABLE WORKS
 SUPERIOR: MIN OF POSTS AND TELECOMMUNICATIONS
 FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
 FACL LOC: HOUMA
 FSUBORD: FACILITY SUBORDINATION DATA

PFN INFORMATION: PART 009

RELATES: MASI LIGHT GAS TURBINE DEVELOPMENT CENTER IS ASSOCIATED WITH THE FT-8 GAS TURBINE, WJ6G ENGINE, WP6G ENGINE, WZ6G ENGINE, WJ5G ENGINE, WS9G ENGINE AND WZ5G ENGINE.

FACILITY: MASI LIGHT GAS TURBINE DEVELOPMENT CENTER
 FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
 FACL DATA: FACILITY NAME EQUATE AVAILABLE

NOMN: FT-8 (FT8) GAS TURBINE
 NOMN CTY: PEOPLES REPUBLIC OF CHINA (CH)

NOMN: WJ6G ENGINE
 NOMN CTY: PEOPLES REPUBLIC OF CHINA (CH)

NOMN: WP6G ENGINE
 NOMN CTY: PEOPLES REPUBLIC OF CHINA (CH)

NOMN: WZ6G ENGINE
 NOMN CTY: PEOPLES REPUBLIC OF CHINA (CH)

NOMN: WJ5G ENGINE
 NOMN CTY: PEOPLES REPUBLIC OF CHINA (CH)

UNCLASSIFIED

* * * * * SG1J * * * * *

SEQUENCE NR: CIF90005966 USER- [REDACTED] ID: 43070-92APR28/10.52.06/A01

NOMN: WS9G ENGINE
NOMN CTY: PEOPLES REPUBLIC OF CHINA (CH)

NOMN: WZ5G ENGINE
NOMN CTY: PEOPLES REPUBLIC OF CHINA (CH)

PFN INFORMATION: PART 010

RELATES: CHENGDU AIRCRAFT FACTORY AND 611TH AIRCRAFT RI ARE ASSOCIATED WITH THE F-7 AIRCRAFT.

FACILITY: CHENGDU AIRCRAFT FACTORY
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACL LOC: CHENGDU

FACILITY: 611TH AIRCRAFT RI
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)

NOMN: F-7 (F7) AIRCRAFT
NOMN CTY: PEOPLES REPUBLIC OF CHINA (CH)

PFN INFORMATION: PART 011

RELATES: BAOQI CHEN IS A MEMBER OF CHINA HELICOPTER INDUSTRY CORP. BAOQI CHEN IS ASSOCIATED WITH JINGDEZHEN AIRCRAFT MANUFACTURING PLANT, AEROSPATIALE AND AEROSPACE TECHNOLOGIES.

PERSON: CHEN, BAOQI
PROTITLE: GENERAL MANAGER
PERS CTY: PEOPLES REPUBLIC OF CHINA (CH)

PERSON: CHEN, BAOQI
PROTITLE: GENERAL MANAGER
PERS CTY: PEOPLES REPUBLIC OF CHINA (CH)

FACILITY: CHINA HELICOPTER INDUSTRY CORP
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)

FACILITY: JINGDEZHEN AIRCRAFT MANUFACTURING PLANT
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACL LOC: JINGDEZHEN

FACILITY: AEROSPATIALE
FACL CTY: FRANCE (FR)

FACILITY: AEROSPACE TECHNOLOGIES

UNCLASSIFIED

* * * * * SG1J * * * * *

SEQUENCE NR: CIF90005966 USER- [REDACTED] ID: 43070-92APR28/10.52.06/A01

FACL CTY: AUSTRALIA (AT)

PFN INFORMATION: PART 012

RELATES: THE Z-9 HELICOPTER WAS MANUFACTURED AT CHINA HELICOPTER INDUSTRY CORP.

FACILITY: CHINA HELICOPTER INDUSTRY CORP
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)

NOMN: Z-9 (Z9) HELICOPTER
NOMN CTY: PEOPLES REPUBLIC OF CHINA (CH), FRANCE (FR)

PFN INFORMATION: PART 013

FACILITY: ZHONGHUA SHIPYARD
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACL LOC: SHANGHAI

FACILITY: SHANGHAI RAILWAY BUREAU
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACL LOC: SHANGHAI

FACILITY: DALIAN SHIPYARD
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)

PFN INFORMATION: PART 014

RELATES: IAN STONE IS A MEMBER OF ATC INTERNATIONAL RESEARCH. IAN STONE IS ASSOCIATED WITH INST OF INTERNATIONAL RESEARCH.

PERSON: STONE, IAN
PROTITLE: DIRECTOR
PERS CTY: HONG KONG (HK)

PERSON: STONE, IAN
PROTITLE: DIRECTOR
PERS CTY: HONG KONG (HK)

FACILITY: ATC INTERNATIONAL RESEARCH
FACL CTY: HONG KONG (HK)

FACILITY: INST OF INTERNATIONAL RESEARCH
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)

UNCLASSIFIED

* * * * * SG1J * * * * *

SEQUENCE NR: CIF90005966 USER- [REDACTED] ID: 43070-92APR28/10.52.06/A01

PFN INFORMATION: PART 015

RELATES: JIAHUA ZOU IS A MEMBER OF MIN OF MACHINE BUILDING ELECTRONICS INDUSTRY. JIAHUA ZOU IS ASSOCIATED WITH VOLKSWAGEN, SHANGHAI SANTANA AUDI 100 PLANT AND CHANGCHUN AUDI 100 PLANT.

PERSON: ZOU, JIAHUA
PROTITLE: MINISTER
PERS CTY: PEOPLES REPUBLIC OF CHINA (CH)

PERSON: ZOU, JIAHUA
PROTITLE: MINISTER
PERS CTY: PEOPLES REPUBLIC OF CHINA (CH)

FACILITY: MIN OF MACHINE BUILDING ELECTRONICS INDUSTRY
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACL DATA: FACILITY NAME EQUATE AVAILABLE

FACILITY: VOLKSWAGEN
FACL CTY: GERMANY (GM)

FACILITY: SHANGHAI SANTANA AUDI 100 PLANT
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACL LOC: SHANGHAI

FACILITY: CHANGCHUN AUDI 100 PLANT
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACL LOC: CHANGCHUN

PFN INFORMATION: PART 016

NOMN: H3/36 (H336) TOWER CRANE
NOMN CTY: PEOPLES REPUBLIC OF CHINA (CH)

PFN INFORMATION: PART 017

FACILITY: GENERAL BEARING CORP
FACL CTY: UNITED STATES (US)

FACILITY: SHANGHAI ROLLER BEARING PLANT
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACL LOC: SHANGHAI

FACILITY: QING LING AUTOMOTIVE PLANT

UNCLASSIFIED

* * * * * SG1J * * * * *

SEQUENCE NR: CIF90005966 USER- [REDACTED] ID: 43070-92APR28/10.52.06/A01

FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)

FACILITY: ISUZU COMPANY
FACL CTY: JAPAN (JA)

PFN INFORMATION: PART 018

FACILITY: BEIJING TELECOMMUNICATIONS BUREAU
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)

FACILITY: CAP SESA
FACL CTY: FRANCE (FR)

FACILITY: COSTIND COMMAND SKILL INST
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACLDATA: FACILITY NAME EQUATE AVAILABLE

PFN INFORMATION: PART 019

RELATES: YONGSHEN LIU IS A MEMBER OF QIMING SOFTWARE COMPANY AND QIMING SOFTWARE COMPANY. YONGSHEN LIU IS ASSOCIATED WITH MIN OF PUBLIC SECURITY.

PERSON: LIU, YONGSHEN
PROTITLE: ENGINEER
PERS CTY: PEOPLES REPUBLIC OF CHINA (CH)

PERSON: LIU, YONGSHEN
PROTITLE: ENGINEER
PERS CTY: PEOPLES REPUBLIC OF CHINA (CH)

FACILITY: QIMING SOFTWARE COMPANY
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACL LOC: SHANGHAI

FACILITY: QIMING SOFTWARE COMPANY
FACL CTY: JAPAN (JA)
FACL LOC: SHANGHAI

FACILITY: MIN OF PUBLIC SECURITY
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)

PFN INFORMATION: PART 020

FACILITY: MOLEX

UNCLASSIFIED

SEQUENCE NR: CIF90005966 USER- [REDACTED] ID: 43070-92APR28/10.52.06/A01

FACL CTY: UNITED STATES (US)
FACILITY: GUANGDONG CONNECTOR FACTORY
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACL LOC: SHILONG

PFN INFORMATION: PART 021

RELATES: GUANGZHOU ZHOU IS A MEMBER OF CAS. GUANGZHOU ZHOU IS ASSOCIATED WITH INST OF COMPUTER TECHNOLOGY AND LEGEND COMPUTER COMPANY.

PERSON: ZHOU, GUANGZHOU
PROTITLE: PRESIDENT
PERS CTY: PEOPLES REPUBLIC OF CHINA (CH)

PERSON: ZHOU, GUANGZHOU
PROTITLE: PRESIDENT
PERS CTY: PEOPLES REPUBLIC OF CHINA (CH)

FACILITY: CAS
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACLDATA: FACILITY NAME EQUATE AVAILABLE

FACILITY: INST OF COMPUTER TECHNOLOGY
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)

FACILITY: LEGEND COMPUTER COMPANY
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)

PFN INFORMATION: PART 022

RELATES: YONGMIN WANG IS ASSOCIATED WITH MPT.

PERSON: WANG, YONGMIN
PROTITLE: COMPUTER EXPERT
PERS CTY: PEOPLES REPUBLIC OF CHINA (CH)

FACILITY: MPT
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACLDATA: FACILITY NAME EQUATE AVAILABLE

PFN INFORMATION: PART 023

FACILITY: SANMENXIA POWER STATION

UNCLASSIFIED

* * * * * SG1J * * * * *

SEQUENCE NR: CIF90005966 USER- [REDACTED] ID: 43070-92APR28/10.52.06/A01

FACILITY: PEOPLES REPUBLIC OF CHINA (CH)
FACIL LOC: SANMENXIA

FACILITY: GEZHOUBA POWER STATION
FACIL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACIL LOC: GEZHOUBA

FACILITY: PEOPLES ARMED POLICE SECOND HYDROPOWER GENERAL UNIT
FACIL CTY: PEOPLES REPUBLIC OF CHINA (CH)

FACILITY: WAN'AN HYDROPOWER STATION
FACIL CTY: PEOPLES REPUBLIC OF CHINA (CH)

PFN INFORMATION: PART 024

FACILITY: LONGYANGXIA POWER STATION
FACIL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACIL LOC: LONGYANGXIA

FACILITY: QINLING POWER STATION
FACIL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACIL LOC: QINLING

FACILITY: NATIONAL APPRAISAL COMMITTEE
FACIL CTY: PEOPLES REPUBLIC OF CHINA (CH)

FACILITY: QINSHAN NUCLEAR POWER STATION
FACIL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACIL LOC: QINSHAN

FACILITY: CHINA GENERAL NUCLEAR INDUSTRIAL CORP
FACIL CTY: PEOPLES REPUBLIC OF CHINA (CH)

FACILITY: QINGHUA UNIV
FACIL CTY: PEOPLES REPUBLIC OF CHINA (CH)

FACILITY: ANKANG HYDROPOWER STATION
FACIL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACIL LOC: ANKANG

PFN INFORMATION: PART 025

PERSON: ZOU, JIAHUA
PROTITLE: STATE COUNCILOR
PERS CTY: PEOPLES REPUBLIC OF CHINA (CH)

SEQUENCE NR: CIF90005966 USER- [REDACTED] ID: 43070-92APR28/10.52.06/A01

PFN INFORMATION: PART 026

RELATES: YI ZENG IS A MEMBER OF AIDS RESEARCH AND TESTING CENTER
(CHINESE ACAD OF PREVENTIVE MEDICINE).

PERSON: ZENG, YI
PROTITLE: VIROLOGIST, PROFESSOR, DIRECTOR
PERS CTY: PEOPLES REPUBLIC OF CHINA (CH)

FACILITY: AIDS RESEARCH AND TESTING CENTER
SUPERIOR: CHINESE ACAD OF PREVENTIVE MEDICINE
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FSUBORD: FACILITY SUBORDINATION DATA

PFN INFORMATION: PART 027

FACILITY: CHINA MEDICAL SCIENCE UNIV
SUBORD: MEDICAL RESEARCH CENTER
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACL LOC: SHENYANG
FSUBORD: FACILITY SUBORDINATION DATA

PFN INFORMATION: PART 028

RELATES: JILIN ANTICANCER ASSOCIATION CHANGBAISHAN PHARMACEUTICAL
INST, TIANJIN INST OF MEDICAL AND PHARMACEUTICAL SCIENCES
AND CHINA INST OF TRADITIONAL MEDICINES BEIJING
GUANGANMEN HOSPITAL ARE ASSOCIATED WITH THE TIANXIAN
ANTICANCER DRUG.

FACILITY: JILIN ANTICANCER ASSOCIATION CHANGBAISHAN PHARMACEUTICAL
INST
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACL LOC: CHANGBAISHAN

FACILITY: TIANJIN INST OF MEDICAL AND PHARMACEUTICAL SCIENCES
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACL LOC: TIANJIN

FACILITY: CHINA INST OF TRADITIONAL MEDICINES BEIJING GUANGANMEN
HOSPITAL
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACL LOC: BEIJING

NOMN: TIANXIAN ANTICANCER DRUG
NOMN CTY: PEOPLES REPUBLIC OF CHINA (CH)

UNCLASSIFIED

* * * * * SG1J * * * * *

SEQUENCE NR: CIF90005966 USER- [REDACTED] ID: 43070-92APR28/10.52.06/A01

PFN INFORMATION: PART 029

RELATES: MOZHUANG LIU IS A MEMBER OF HEBEI PROVINCIAL ACAD OF MEDICAL SCIENCES. XIUREN YAO IS A MEMBER OF CHINESE ACAD OF GEOLOGICAL SCIENCES.

PERSON: LIU, MOZHUANG
PROTITLE: SENIOR DOCTOR
PERS CTY: PEOPLES REPUBLIC OF CHINA (CH)

PERSON: YAO, XIUREN
PROTITLE: RESEARCH FELLOW
PERS CTY: PEOPLES REPUBLIC OF CHINA (CH)

FACILITY: HEBEI PROVINCIAL ACAD OF MEDICAL SCIENCES
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)

FACILITY: CHINESE ACAD OF GEOLOGICAL SCIENCES
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)

PFN INFORMATION: PART 030

RELATES: SHUNLIU ZONG IS A MEMBER OF GENERAL LOGISTICS DEPARTMENT. SHUNLIU ZONG IS ASSOCIATED WITH PLA.

PERSON: ZONG, SHUNLIU
PROTITLE: DEPUTY DIRECTOR
PERS CTY: PEOPLES REPUBLIC OF CHINA (CH)

PERSON: ZONG, SHUNLIU
PROTITLE: DEPUTY DIRECTOR
PERS CTY: PEOPLES REPUBLIC OF CHINA (CH)

FACILITY: GENERAL LOGISTICS DEPARTMENT
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACLDATA: FACILITY NAME EQUATE AVAILABLE

FACILITY: PLA
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)

PFN INFORMATION: PART 031

FACILITY: ARMY AVIATION
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)

FACILITY: NAVAL AIR FORCE

UNCLASSIFIED

SG1J

SEQUENCE NR: CIF90005966 USER: [REDACTED] ID: 43070-92APR28/10.52.06/A01

FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)

FACILITY: AIR FORCE ENGINEERING INST
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)

FACILITY: NANJING MR AIR FORCE LOGISTICS DEPARTMENT
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)

PFN INFORMATION: PART 032

RELATES: BINGLIN LI IS A MEMBER OF FOURTH MILITARY MEDICAL UNIV.

PERSON: LI, BINGLIN
PROTITLE: LECTURER
PERS CTY: PEOPLES REPUBLIC OF CHINA (CH)

FACILITY: FOURTH MILITARY MEDICAL UNIV
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACL LOC: XIAN

PFN INFORMATION: PART 033

RELATES: ZHONGWEN TANG IS A MEMBER OF CHINA ORDNANCE SOCIETY.

PERSON: TANG, ZHONGWEN
PROTITLE: CHAIRMAN
PERS CTY: PEOPLES REPUBLIC OF CHINA (CH)

FACILITY: CHINA ORDNANCE SOCIETY
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)

PFN INFORMATION: PART 034

PERSON: LI, PENG
PROTITLE: PRIME MINISTER
PERS CTY: PEOPLES REPUBLIC OF CHINA (CH)

PERSON: JIANG, ZEMIN
PROTITLE: PARTY SECRETARY
PERS CTY: PEOPLES REPUBLIC OF CHINA (CH)

PERSON: ZHENG, TUOBIN
PROTITLE: MINISTER OF FOREIGN ECONOMIC RELATIONS AND TRADE
PERS CTY: PEOPLES REPUBLIC OF CHINA (CH)

UNCLASSIFIED

SEQUENCE NR: CIF90005966 USER- [REDACTED] ID: 43070-92APR28/10.52.06/A01

PFN INFORMATION: PART 035

RELATES: BEIJING HAIDING LEIYIN TECHNICAL CORP IS ASSOCIATED WITH THE LONG MARCH II CARRIER ROCKET.

FACILITY: BEIJING HAIDING LEIYIN TECHNICAL CORP
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACL LOC: BEIJING

NOMN: LONG MARCH II CARRIER ROCKET
NOMN CTY: PEOPLES REPUBLIC OF CHINA (CH)

PFN INFORMATION: PART 036

RELATES: MIN 1728-2404 ZHANG IS A MEMBER OF COSTIND. ZHONGSHAN 0491-0022 LIU IS ASSOCIATED WITH NATIONAL DEFENSE SCIENCE AND TECHNOLOGY UNIV.

PERSON: ZHANG, MIN 1728-2404
PROTITLE: LT GENERAL, CHIEF-OF-STAFF
PERS CTY: PEOPLES REPUBLIC OF CHINA (CH)

PERSON: LIU, ZHONGSHAN 0491-0022
PROTITLE: MAJOR GENERAL, DEPUTY POLITICAL DEPARTMENT DIRECTOR
PERS CTY: PEOPLES REPUBLIC OF CHINA (CH)

FACILITY: COSTIND
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACL DATA: FACILITY NAME EQUATE AVAILABLE

FACILITY: NATIONAL DEFENSE SCIENCE AND TECHNOLOGY UNIV
FACL CTY: PEOPLES REPUBLIC OF CHINA (CH)
FACL DATA: FACILITY NAME EQUATE AVAILABLE

PFN INFORMATION: PART 037

PERSON: XU, XINTIAN
PROTITLE: ASSISTANT ENGINEER
PERS CTY: PEOPLES REPUBLIC OF CHINA (CH)
PERS DATA: AWARD DATA