

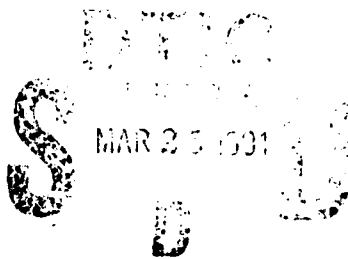
AD-A233 273

FTD-ID(RS)T-1042-90

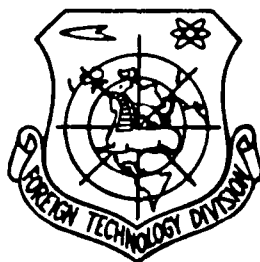
DTIC FILE COPY

2

FOREIGN TECHNOLOGY DIVISION



RESEARCH ON "INDUSTRIAL 10KW CO₂ LASET"
ACHIEVES MAJOR BREAKTHROUGH



Approved for public release;
Distribution unlimited.



91 8 10 370

HUMAN TRANSLATION

FTD-ID(RS)T-1042-90 24 January 1991

MICROFICHE NR: FTD-91-C-000130

RESEARCH ON "INDUSTRIAL 10kW CO₂ LASER"
ACHIEVES MAJOR BREAKTHROUGH

English pages: 1

Source: Zhong Guo Gao Deng Jiao Yu, Nr. 12,
1989, pp. 41

Country of origin: China

Translated by: Randy Dorsey

Requester: FTD/TTTD/Butler

Approved for public release; Distribution unlimited.

2
By
Date
A-1

<p>THIS TRANSLATION IS A RENDITION OF THE ORIGINAL FOREIGN TEXT WITHOUT ANY ANALYTICAL OR EDITORIAL COMMENT. STATEMENTS OR THEORIES ADVOCATED OR IMPLIED ARE THOSE OF THE SOURCE AND DO NOT NECESSARILY REFLECT THE POSITION OR OPINION OF THE FOREIGN TECHNOLOGY DIVISION</p>	<p>PREPARED BY: TRANSLATION DIVISION FOREIGN TECHNOLOGY DIVISION WPAFB, OHIO</p>
--	--

GRAPHICS DISCLAIMER

All figures, graphics, tables, equations, etc. merged into this translation were extracted from the best quality copy available.

**RESEARCH ON "INDUSTRIAL 10kW CO₂ LASER"
ACHIEVES MAJOR BREAKTHROUGH**

A national key task item of the 7th Five-Year Plan, the "INDUSTRIAL 10kW CO₂ LASER", has been undertaken by units such as the Central College of Science and Engineering, supported by the National Education Committee. Important key S&T targets of the 7th Five-Year Plan have already been achieved. This laser is capable of continuous output power of over 10kW and can operate continuously for more than 6 hours.

The industrial 10kW CO₂ laser is one of the items which the industrially developed nations are competing to develop. At present, only 5 countries in the world, U. S., Soviet Union, U. K., Japan, and Canada, have a CO₂ laser of more than 10kW. The 10kW CO₂ laser developed as a key task of China's 7th Five-Year Plan and all its technological targets such as output power, electrooptical conversion efficiency and primary charging continuous operating time, have reached the level of world advancement, allowing China to enter the ranks of international advancement in the area of laser technology.

The industrial 10kW CO₂ laser can have wide application in such areas of industry as heat treating, machining, welding and surface treatment in industries such as steel, automobiles, ship building and aircraft manufacturing. For instance, using the high-efficiency laser beams of this 10kW laser to treat rollers, fan blades and automotive cylinder blocks can increase the life of these parts and produce large economic benefits. At present, industrial tests of gear welding is already being done on this 10kW laser. Once it proves successful and is introduced to the automotive industry, it will produce an annual economic benefit of 2,000,000-3,000,000 yuan.

(NATIONAL EDUCATION COMMITTEE
S & T DEPARTMENT FOR KEY TASKS)

DISTRIBUTION LIST

DISTRIBUTION DIRECT TO RECIPIENT

<u>ORGANIZATION</u>	<u>MICROFICHE</u>
C509 BALLISTIC RES LAB	1
C510 R&T LABS/AVEADCOM	1
C513 ARRADCOM	1
C535 AVRADCOM/TSARCOM	1
C539 TRASANA	1
Q591 FSTC	4
Q619 MSIC REDSTONE	1
Q008 NTIC	1
E053 HQ USAF/INET	1
E404 AEDC/DOF	1
E408 AFWL	1
E410 AD/IND	1
F429 SD/IND	1
P005 DOE/ISA/DDI	1
P050 CIA/OCR/ADD/SD	2
AFTT/LDE	1
NOIC/OIC-9	1
CCV	1
MIA/PHS	1
LLYL/CODE L-309	1
NSA/ST-14	1
NSA/T513/IDL	2
ASD/FTD/TTIA	1
FSL	1