CJICHMT-2000

HISTORY OF MECHANICAL TECHNOLOGY (2)

Proceedings of the Second China-Japan International Conference On History of Mechanical Technology

November 1-3, 2000
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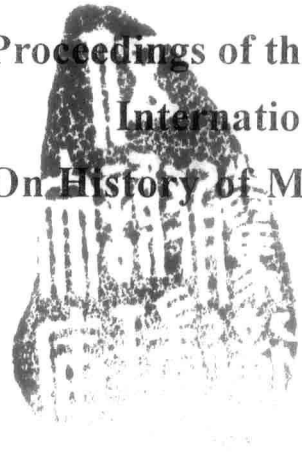

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机械技术史（2）
——第二届中日机械技术史国际学术会议论文集

HISTORY OF MECHANICAL TECHONOGY（2）
——Proceedings of the Second International Conference on History of Mechanical Technology

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THE SECOND CHINA-JAPAN INTERNATIONAL CONFERENCE ON HISTORY OF MECHANICAL TECHNOLOGY

CJICHMT-2000

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The main subject covers all aspects of mechanical technology development(machine, mechanism, machine element, structure, material, strength, vibration and noise, tribology, failure analysis, design method, calculation method, …,CAD, manufacturing technique, precision, testing technology, standardization, …), concerning persons (人，人) events (事，こと), things (物，もの) and experience and laws (理，**経験と規律**) of mechanical technology development, and in the form of reasoning and argumentation (论，**論じ**), demonstration and identification (证，**実証**), description and explanation (述，**叙述**), and judgement and evaluation (评，**評価**). In the light of time and space, the themes extend from ancient to modern times and expand from domestic to abroad (古、今、中、外，**往时**、**现在、国内、国外**). As viewed from the development course, the themes include review of the past (回顾过去，**往时を回顧する**), observation of the present (观察现在，**现在を観察する**) and prediction of the future (展望未来，**未来を展望する**).

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PREFACE

值此第二届中日机械技术史国际学术会议 CJICHMT-2000 即将于 2000 年 11 月 1~3 日在南京航空航天大学召开，会议论文集《机械技术史②》将于同年 10 月由中国机械工业出版社（China Machine Press）出版之际，我感到衷心的高兴，并表示对会议的真诚祝贺！

今年是千禧之年，又值中国机械工程学会机械史分会成立十周年，举办这样一个国际学术会议，出版一本力求可作为历史文献的论文集，我想自然是具有重要的和纪念意义的学术活动，也是中日同行友好合作的一次跃进！

1998 年是一个值得回忆的一年。那一年，在北京航空航天大学召开了第一届中日机械技术史国际学术会议，那是一个极好的开端——开启了中日机械技术史同行的大规模的学术交流，开辟了一个新的学术交流领域。而且，虽然在论文集的印刷和会议的进行都有一些缺点和不足，但也总结了不少举办机械技术史国际学术会议的经验，特别是中日双方同行的相识和彼此在机械技术史研究方面的了解，不仅为各自的研究和双方的交流提供了更好的基础与条件，也孕育了这届会议的诞生。

这届会议的筹备工作和论文集的编辑与第一届会议的基本相同，会议论文集取名为《机械技术史②》，既有承前的含义，更有启后的愿望。论文集收集了中日双方机械技术史同行的许多近年研究的成果，有些还是多年研究的总结，对机械技术发展的回顾过去、观察现在、展望未来，人、事、物、理和论、证、述、评，方方面面，清新多采，作者老与中、青，显示了人才力量。除分“通论与综述”、“古代机械技术”、“近、现代机械技术”三部分外，还加了“其他”部分，收入由于各种原因，虽初稿早交但定稿迟到的论文，为数很少，这些论文仍分别编入所属前三部分的目录中，只是全文排在作为殿后的“其他”部分。

在此，我作为参加会议筹备和论文征集编辑的一员，也代表会议筹备委员会，感受甚深之余，更愿借此机会对支持和帮助这届会议的学术机构，专家、学者，会议筹备委员会成员，表示由衷的感谢！

非常感谢中日双方会议主办单位和协办单位！他们的支持和帮助不仅是对会议，更是对机械史研究和中日同行的交流的有力的肯定和鼓励！

非常感谢日方江藤元大教授，下間一名譽教授，三輪修三名誉教授，小沢康美教授，白井靖幸助教授，佐藤建吉助教授，堤一郎先生，緒方正則先生！他们对会议的策划，征集论文，以及筹备的各项细节工作付出了大量的努力，与中方会议筹备委员会保持密切联系

和同步进行！也非常感谢谢爽女士为会议的筹备做了大量的、及时的联系工作！

非常感谢中方参加会议各项工作的有关各级领导和专家、学者对会议的关心和支持！感谢中国机械工业出版社提供会议文集的出版机会和对论文集的细心审阅！这里还要特别提到的是中国国家自然科学基金委员会对会议的大力支持！国家自然科学基金委员会的支持，不单是对这次会议的，而且包括此前和现时对机械技术史研究工作的帮助。这届会议征集到的论文中，有不少就是国家自然科学基金委员会支持的研究课题的重要成果。

就个人的感受而言，还有一点极为深刻，那就是感谢各有关方面的领导、中日双方机械技术史同行和论文的作者对我的信任。那些信任是对我的鼓励和鞭策！

祝第二届中日机械技术史国际学术会议圆满成功！中日同行友好合作大步前进！迎接新世纪的到来！

郭可谦 郭可谦

2000 年 10 月 8 日

FOREWORD

第二回日中機械技術史に関する国際会議２０００が南京市の南京航空航天大学に於いて前回と同じ様に多数の参加者を得て盛大に行われる事になりました。これは誠に喜ばしい次第です。日本では近年機械技術史に対する関心が深まりつつあり今回長い歴史を持つ都市である南京市に於いて機械技術史に関する国際会議２０００が行われる様になった事は大変意義のある事だと思われます。

人間は昔から多くの品物（製品）を作ってきましたが、それらがうまく出来上るためにはその製品が開発されたその時代の技術の環境（材料、加工技術等）に大きく支配されて来た事も事実です。従って技術環境が不十分の時には素晴らしい考えの製品であってもそれが実現する事は不可能であった筈で過去のその時代における正確な技術環境を知る事が出来れば実現不可能の原因を知る事が出来、今後の新製品の開発に大きく役立たせる事が出来るものと思われます。このための大きな役目を果たすのが歴史、特に工業製品の場合は機械技術史がその一端を担うものだと考えられます。

しかし、過去の技術史は必ずしも完全なものでないというのは系統的な又、組織的な研究が少なかった事も大きく影響しているものと思われます。このためには技術史関係研究者の一層の協力が今後も欠かせないものである事は事実であります。このためにも今回の第二回日中機械技術史に関する国際会議２０００は大変価値のある会議だと思われます。

ここに今回のこの会議の成功と機械技術史の益々の発展を心からお祈りするとともに今回のこの会議が日中友好に大いに貢献する事を期待しています。

終りに今回の国際会議２０００の開催は中国側は郭可謙北京航空航天大学教授、その他の方々、日本側は下間頼一関西大学名誉教授、その他の多くの方々の献身的なご協力によるものです、ここに皆様方に厚くお礼申し上げる次第です。

江藤元大

江藤元大

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