

Iso 8217 2012 Fuel Standard Transoil Holdings

The 2016 International Conference on Materials Science, Energy Technology and Environmental Engineering (MSETEE 2016) took place May 28-29, 2016 in Zhuhai City, China. MSETEE 2016 brought together academics and industrial experts in the field of materials science, energy technology and environmental engineering. The primary goal of the conference was to promote research and developmental activities in these research areas and to promote scientific information interchange between researchers, developers, engineers, students, and practitioners working around the world. The conference will be held every year serving as platform for researchers to share views and experience in materials science, energy technology and environmental engineering and related areas.

Special edition of the Federal Register, containing a codification of documents of general applicability and future effect ... with ancillaries.

This book is a highly respected and invaluable introduction to the bunker industry. It provides clear answers to complicated questions and its useful, up-to-date data and illustrations will help anyone in the maritime industry to understand exactly what bunkering is all about.

(Volume 37) Parts 1060 -End

Sustainable Maritime Transportation and Exploitation of Sea Resources covers the most updated aspects of maritime transports and of coastal and sea resources exploitation, with a focus on (but not limited to) the Mediterranean area. Vessels for transportation are analysed from the viewpoint of ship design in terms of hydrodynamic, structural and plant optimisation, as well as from the perspective of construction, maintenance, operation and logistics. The exploitation of marine and coastal resources is covered in terms of fishing, aquaculture and renewable energy production as well as of subsea resources extraction. The characterisation of the marine environment is seen under the twofold perspective of providing reference loads and conditions for the design of means for the resources exploitation, but also of setting limits to the design in order to preserve the natural ambient and minimise the impact of anthropogenic activities related to both transportation and exploitation. Efficiency, reliability, safety and sustainability of sea- and Mediterranean-related human activities are the focus throughout the book. Sustainable Maritime Transportation and Exploitation of Sea Resources will be of interest to technical operators in the various areas involved (shipbuilding and ship-owner companies, research organisations, universities, certifying bodies), but will also serve as an updated reference work for government agencies and other institutional and educational bodies.

Pounder's Marine Diesel Engines and Gas Turbines, Tenth Edition, gives engineering cadets, marine engineers, ship

operators and managers insights into currently available engines and auxiliary equipment and trends for the future. This new edition introduces new engine models that will be most commonly installed in ships over the next decade, as well as the latest legislation and pollutant emissions procedures. Since publication of the last edition in 2009, a number of emission control areas (ECAs) have been established by the International Maritime Organization (IMO) in which exhaust emissions are subject to even more stringent controls. In addition, there are now rules that affect new ships and their emission of CO₂ measured as a product of cargo carried. Provides the latest emission control technologies, such as SCR and water scrubbers Contains complete updates of legislation and pollutant emission procedures Includes the latest emission control technologies and expands upon remote monitoring and control of engines

Safety and Reliability – Theory and Applications contains the contributions presented at the 27th European Safety and Reliability Conference (ESREL 2017, Portorož, Slovenia, June 18-22, 2017). The book covers a wide range of topics, including: • Accident and Incident modelling • Economic Analysis in Risk Management • Foundational Issues in Risk Assessment and Management • Human Factors and Human Reliability • Maintenance Modeling and Applications • Mathematical Methods in Reliability and Safety • Prognostics and System Health Management • Resilience Engineering • Risk Assessment • Risk Management • Simulation for Safety and Reliability Analysis • Structural Reliability • System Reliability, and • Uncertainty Analysis. Selected special sessions include contributions on: the Marie Skłodowska-Curie innovative training network in structural safety; risk approaches in insurance and finance sectors; dynamic reliability and probabilistic safety assessment; Bayesian and statistical methods, reliability data and testing; organizational factors and safety culture; software reliability and safety; probabilistic methods applied to power systems; socio-technical-economic systems; advanced safety assessment methodologies: extended Probabilistic Safety Assessment; reliability; availability; maintainability and safety in railways: theory & practice; big data risk analysis and management, and model-based reliability and safety engineering. Safety and Reliability – Theory and Applications will be of interest to professionals and academics working in a wide range of industrial and governmental sectors including: Aeronautics and Aerospace, Automotive Engineering, Civil Engineering, Electrical and Electronic Engineering, Energy Production and Distribution, Environmental Engineering, Information Technology and Telecommunications, Critical Infrastructures, Insurance and Finance, Manufacturing, Marine Industry, Mechanical Engineering, Natural Hazards, Nuclear Engineering, Offshore Oil and Gas, Security and Protection, Transportation, and Policy Making.

This machine is destined to completely revolutionize cylinder diesel engine up through large low speed t- engine engineering and replace everything that exists. stroke diesel engines. An appendix lists the most (From Rudolf Diesel's letter of October 2, 1892 to the important standards and regulations for diesel engines. publisher Julius Springer.) Further development of diesel engines as economiz- Although

Diesel's stated goal has never been fully ing, clean, powerful and convenient drives for road and achievable of course, the diesel engine indeed revolu- nonroad use has proceeded quite dynamically in the tionized drive systems. This handbook documents the last twenty years in particular. In light of limited oil current state of diesel engine engineering and technol- reserves and the discussion of predicted climate ogy. The impetus to publish a Handbook of Diesel change, development work continues to concentrate Engines grew out of ruminations on Rudolf Diesel's on reducing fuel consumption and utilizing alternative transformation of his idea for a rational heat engine fuels while keeping exhaust as clean as possible as well into reality more than 100 years ago. Once the patent as further increasing diesel engine power density and was filed in 1892 and work on his engine commenced enhancing operating performance.

This programme assesses progress made by individual countries, in this case Albania, in reconciling their economic and social development with environmental protection, as well as in meeting international commitments on environment and sustainable development. It assists countries to improve their environmental policies by making concrete recommendations for better policy design and implementation. The reviews help to integrate environmental policies into sector-specific policies such as those in agriculture, energy, transport and health.

GB/T 17411-2012 Code for welding of steel structures English-translated version

The comprehensive guide to working more effectively within the multi-commodity market. The Handbook of Multi-Commodity Markets and Products is the definitive desktop reference for traders, structurers, and risk managers who wish to broaden their knowledge base. This non-technical yet sophisticated manual covers everything the professional needs to become acquainted with the structure, function, rules, and practices across a wide spectrum of commodity markets. Contributions from a global team of renowned industry experts provide real-world examples for each market, along with tools for analyzing, pricing, and risk managing deals. The discussion focuses on convergence, including arbitrage valuation, econometric modeling, market structure analysis, contract engineering, and risk, while simulated scenarios help readers understand the practical application of the methods and models presented. Gradual deregulation and the resulting increase in diversity and activity have driven the evolution of the traditionally segmented market toward integration, raising important questions about opportunity identification and analysis in multi-commodity deals. This book helps professionals navigate the shift, providing in-depth information and practical advice. Structure and manage both simple and sophisticated multi-commodity deals Exploit pay-off profiles and trading strategies with a diversified set of commodity prices Develop more accurate forecasting models by considering additional metrics Price energy products and other commodities in segmented markets with an eye toward specific structural features As one of the only markets strong enough to boom during the credit crunch, the commodities markets are growing rapidly. Combined with increasing convergence, this transition presents potentially valuable opportunities for the development of a robust multi-commodity portfolio. For the professional seeking deeper understanding and a more effective strategy, the Handbook of Multi-Commodity Markets and Products offers complete information and expert guidance.

This ready reference is unique in collating in one scientifically precise and comprehensive handbook the widespread data on what is feasible and realistic in modern fuel cell technology. Edited by one of the leading scientists in this exciting area, the short, uniformly written chapters provide economic data for cost considerations and a full overview of demonstration data, covering such topics as fuel cells for transportation, fuel provision, codes and standards. The result is highly reliable facts and figures for engineers, researchers and decision makers working in the field of fuel cells.

The numerical simulation of combustion processes in internal combustion engines, including also the formation of pollutants, has become

increasingly important in the recent years, and today the simulation of those processes has already become an indispensable tool when developing new combustion concepts. While pure thermodynamic models are well-established tools that are in use for the simulation of the transient behavior of complex systems for a long time, the phenomenological models have become more important in the recent years and have also been implemented in these simulation programs. In contrast to this, the three-dimensional simulation of in-cylinder combustion, i. e. the detailed, integrated and continuous simulation of the process chain injection, mixture formation, ignition, heat release due to combustion and formation of pollutants, has been significantly improved, but there is still a number of challenging problems to solve, regarding for example the exact description of sub-processes like the structure of turbulence during combustion as well as the appropriate choice of the numerical grid. While chapter 2 includes a short introduction of functionality and operating modes of internal combustion engines, the basics of kinetic reactions are presented in chapter 3. In chapter 4 the physical and chemical processes taking place in the combustion chamber are described. Chapter 5 is about phenomenological multi-zone models, and in chapter 6 the formation of pollutants is described.

Air pollution is thus far one of the key environmental issues in urban areas. Comprehensive air quality plans are required to manage air pollution for a particular area. Consequently, air should be continuously sampled, monitored, and modeled to examine different action plans. Reviews and research papers describe air pollution in five main contexts: Monitoring, Modeling, Risk Assessment, Health, and Indoor Air Pollution. The book is recommended to experts interested in health and air pollution issues.

A guide to industrially relevant products and processes for transportation fuels The Handbook of Fuels offers a comprehensive review of the wide variety of fuels used to power vehicles, aircraft and ships and examines the processes to produce these fuels. The updated second edition reflects the growing importance of fuels and fuel additives from renewable sources. New chapters include information on current production technology and use of bioethanol, biomethanol and biomass-to-liquid fuels. The book also reviews novel additives and performance enhancers for conventional engines and fuels for novel hybrid engines. This comprehensive resource contains critical information on the legal, safety, and environmental issues associated with the production and use of fuels as well as reviewing important secondary aspects of the use and production of fuels. This authoritative guide includes contributions from authors who are long-standing contributors to the Ullmann's Encyclopedia, the world's most trusted reference for industrial chemistry. This important guide: Contains an updated edition of the authoritative resource to the production and use of fuels used for transportation Includes information that has been selected to reflect only commercially relevant products and processes Presents contributions from a team of noted experts in the field Offers the most recent developments in fuels and additives from renewable sources Written for professionals in the fields of fossil and renewable fuels, engine design, and transportation, Handbook of Fuels is the comprehensive resource that has been revised to reflect the recent developments in fuels used for transportation.

The Role of Bioenergy in the Bioeconomy: Resources, Technologies, Sustainability and Policy provides the reader with a complete understanding on how bioenergy technologies fit into the new bioeconomy paradigm. Sections focus on the main resources and technologies for bioenergy and its integration in energy systems and biorefining chains, analyze the available methodologies for assessing the sustainability of bioenergy, and address and the propose approaches that are demonstrated through concrete case studies. Additionally, the implications of bioenergy in the water-energy and land nexus is presented, along with new challenges and opportunities. This book's strong focus on sustainability of bioenergy, both as a standalone, and in the larger context of a bio-based economy, makes it a useful resource for researchers, professionals and students in the bioenergy field who need tactics to assess the lifecycle and sustainability of bioenergy

technologies and their integration into existing systems. Presents a complete overview of the main challenges that bioenergy will have to overcome in order to play a key role in future energy systems Explores sustainability aspects in detail, both qualitatively and by applying proposed methodologies to concrete bioenergy case studies Covers, in detail, the water-energy-land nexus implications and governance aspects

Shipping activities across the Arctic are expected to increase with decreasing sea ice cover, thus increasing the risk of oil spills. Heavy Fuel Oil (HFO, a mixture of residual fuel and distillate diluent) is often used as fuel in marine vessels as it is relatively cheaper than e.g. lighter marine fuels. Knowledge about fate and behaviour of HFOs is important to select the most efficient countermeasures in an oil spill situation as well as in the risk assessment of possible oil spills in cold waters. The aim of this review is to collate and strengthen the knowledge base on HFO in cold seawater, its fate and behaviour, including weathering, biodegradation, environmental implications of HFO spills and HFO spill response including environmental considerations regarding use of chemical dispersants and in situ burning. Knowledge gaps and research needs are identified and described.

The use of lubricants began in ancient times and has developed into a major international business through the need to lubricate machines of increasing complexity. The impetus for lubricant development has arisen from need, so lubricating practice has preceded an understanding of the scientific principles. This is not surprising as the scientific basis of the technology is, by nature, highly complex and interdisciplinary. However, we believe that the understanding of lubricant phenomena will continue to be developed at a molecular level to meet future challenges. These challenges will include the control of emissions from internal combustion engines, the reduction of friction and wear in machinery, and continuing improvements to lubricant performance and life-time. More recently, there has been an increased understanding of the chemical aspects of lubrication, which has complemented the knowledge and understanding gained through studies dealing with physics and engineering. This book aims to bring together this chemical information and present it in a practical way. It is written by chemists who are authorities in the various specialisations within the lubricating industry, and is intended to be of interest to chemists who may already be working in the lubricating industry or in academia, and who are seeking a chemist's view of lubrication. It will also be of benefit to engineers and technologists familiar with the industry who require a more fundamental understanding of lubricants.

Topical Issues of Rational Use of Natural Resources 2019 Vol. 2 contains the contributions presented at the XV International Forum-Contest of Students and Young Researchers under the auspices of UNESCO (St. Petersburg Mining University, Russia, 13-17 May 2019). The Forum-Contest is a great opportunity for young researchers to present their work to the academics involved or interested in the area of extraction and processing of natural resources. The topics of the book include:

- Geotechnologies of resource extraction: current challenges and prospects
- Cutting edge technologies of geological mapping, search and prospecting of mineral deposits
- Digital and energy saving technologies in mineral resource complex
- Breakthrough technologies of integrated processing of mineral hydrocarbon and technogenic raw materials with further production of new generation materials
- The latest management and financing solutions for the development of mineral resources sector
- Environment protection and sustainable nature management
- New approaches to resolving hydrocarbon sector-specific issues

Topical Issues of Rational Use of Natural Resources 2019 Vol. 2 collects the best reports presented at the Forum-Contest, and is of interest to academics and professionals involved in the extraction and processing of natural resources.

Now in its eighth edition, this classic text is a first point of reference for anyone looking to obtain an understanding of chartering and shipbroking practice. It provides hands-on, commercially-focused explanations of chartering business and invaluable advice on how the

shipping market operates across a broad range of topics. The authors also deal expertly with the legal, financial, operational and managerial aspects of chartering, offering numerous case studies which clearly link theory to practice. This new edition has been fully revised and updated to reflect the current trends in chartering practice, legal developments and standard forms of charterparties. New to this edition: Enriched with practical examples covering crucial aspects of chartering and shipbroking business, such as voyage estimations, freight conversions and tanker calculations. New material on day-to-day laytime principles, including "Laytime Definitions for Charterparties 2013", associated commentary and relevant examples. Shipping Marketing as a modern tool of improving chartering and shipbroking business. Expanded coverage of the economic background of chartering, including markets, vessels, cargoes, trades and fixtures. Freight rates for all vessel types from 1980 to 2015. Updated review of well-known standard charterparty documents (including NYPE 2015), together with clauses and wordings commonly applying to various charter types. Analytical glossary containing typical terms and abbreviations used in chartering negotiations. This book is an essential guide for practitioners in private practice and in-house for shipowners and cargo houses, as well as those studying shipbroking and chartering.

Essential for all vessels who wish to enter an Emission Control Area, are at berth in a United Kingdom port, or a UK passenger ship operating in UK waters and controlled waters or any other passenger ship which calls at a port in the UK. The Merchant Shipping (prevention of Air Pollution from Ships) Regulation 2008, as amended, require that the master of a ship to which the regulations apply make a record to demonstrate compliance for any ship using separate fuel oils and make a record of any fuel changeover operation. The master of a ship to which the regulations apply is required to make a record: (a) in the case of a UK ship, in a log book in the format prescribed in Appendix 6 to Merchant Shipping Notice 1819 (M+F); (b) in the case of any other ship, in a ship's log book. This log book has been approved by the Maritime and Coastguard Agency for use on United Kingdom ships when recording the use of maritime fuel oil in accordance with the requirements of Annex VI of MARPOL and for ships at berth in United Kingdom ports in accordance with EU Directive 199/32/EC, as amended by Directive 2005/33/EC regarding the sulphur content of marine fuels.

This book consists of edited versions of the papers delivered at the Institute of International Shipping and Trade Law's 12th International Colloquium at Swansea Law School in September 2016. Featuring a team of contributors at the top of their profession, both in practice and academia, these papers have been carefully co-ordinated so as to ensure to give the reader a first class insight into the issues surrounding charterparties. The book is set out in three parts. -Part 1 offers a detailed and critical analysis of issues of contemporary importance concerning time charters. -Part 2 carries out a similar analysis with regard to voyage charterparties. -Part 3 deliberates issues common to both type of charterparties. Offering critical analysis of contemporary legal issues on charterparty contracts, this book considers recent legal and practical developments and is therefore essential reading for both professional and academic readers with an interest in charterparties.

Within all areas of transportation, solutions for economical and environmentally friendly technology are being examined. Fuel consumption, combustion processes, control and limitation of pollutants in the exhaust gas are technological problems, for which guidelines like 98/69/EC and 99/96 determine the processes for the reduction of fuel consumption

and exhaust gas emissions. Apart from technological solutions, the consequences of international legislation and their effects on environmental and climate protection in the area of the transportation are discussed.

This book focuses on the interaction between shipping and the natural environment and how shipping can strive to become more sustainable. Readers are guided in marine environmental awareness, environmental regulations and abatement technologies to assist in decisions on strategy, policy and investments. You will get familiar with possible paths to improve environmental performance and, in the long term, to a sustainable shipping sector, based on an understanding of the sources and mechanisms of common impacts. You will also gain knowledge on emissions and discharges from ships, prevention measures, environmental regulations, and methods and tools for environmental assessment. In addition, the book includes a chapter on the background to regulating pollution from ships. It is intended as a source of information for professionals connected to maritime activities as well as policy makers and interested public. It is also intended as a textbook in higher education academic programmes.

Das Buch fasst die Rechtsgrundlagen auf internationaler, nationaler und kommunaler Ebene auf den Gebieten Umweltschutz und Gefahrgutrecht zusammen. Es werden Rechtsanwendungen für die Praxis dargestellt und Besonderheiten kommentiert. Der Einsatz in der Lehre ist möglich, es kann aber auch als Fachbuch gute Dienste leisten und stellt vor allem für die Praxis einen Wissensspeicher dar.

Bunker, als generischer Name von Schifffahrtskraftstoffen, ist in den letzten Jahren ein Hauptkostenbestandteil beim Betrieb von Handelsschiffen geworden. Die Kostenerhöhung des Kraftstoffs, sinkende Qualität und striktere Umweltregularien haben zu einem Anstieg von Auseinandersetzungen in der geschäftlichen Dreiecksbeziehung zwischen Vercharterer, Zeitbefrachter und Bunkerlieferant geführt. Zunächst werden die chemischen Grundlagen des fossilen Brennstoffs Rohöl, der als Rohstoff für Bunkeröl verwendet wird, aufgezeigt. Es folgt eine Klassifikation der Rohöle, um anschließend den Raffinationsprozess zu beschreiben, der erhebliche Auswirkungen auf die Qualität des Schiffsbrennstoffes hat. Dies soll dem Leser verdeutlichen, warum die Qualität von Bunkeröl im Zeitablauf stetig abnimmt. Die abnehmende Qualität des marinen Kraftstoffes veranlasste verschiedene Organisationen Standards für die wichtigsten Qualitätsparameter zu entwickeln, auf die auch regelmäßig in den Zeitcharterverträgen Bezug genommen wird. Nach deren Darstellung folgt die Veranschaulichung der wichtigsten Trends im Hinblick auf Bunkeröl. Die Analyse der rechtlichen Auseinandersetzungen beschränkt sich auf das englische sowie amerikanische Fallrecht. Es werden Auseinandersetzungen zwischen dem Reeder und dem Zeitbefrachter sowie zwischen Letzterem und dem Bunkerlieferanten betrachtet. In der Folge zeigt das Buch mögliche Vermeidungsstrategien im Hinblick auf Qualitätsstreitigkeiten auf. Anschließend werden ein effektives Claims-Management und mögliche

Streitbelegungsmethoden skizziert. Außerdem stellt das vorliegende Buch die wichtigsten Seeversicherungen betreffend Bunkerqualitätsstreitigkeiten dar. Zum Schluss werden wichtige Implikationen für den Praktiker aufgezeigt.

Developed to compliment Volume 8 (General Engineering Knowledge) and work as an examination guide for the requirements of the IMO's Engineering Knowledge under regulation III/2, covering the syllabuses followed by Chief Engineers and 2nd Engineers, this book helps officer cadets working toward the STCW Officer of the Watch qualification or equivalent academic award. Starting with the theoretical and practical thermodynamic operating cycles, the book is structured to give a description of the engines and components used to extract energy from fossil fuels and achieve high levels of productivity. The book covers areas that have the potential to affect engine efficiency and emissions including new electronic control systems, fuel injection and efficient turbocharging. It also looks at waste heat recovery, an important development area for improving the environmental impact of ocean going vessels. It also considers new technology and individual components within the engine which means that more energy, left over from the combustion process, can be extracted and used to improve the total thermal efficiency. The book evaluates issues of safety and environment, highlighting why the new technology must work correctly at all times and why it is necessary that engineering staff onboard understand its operation as well the consequences of any malfunction. This key textbook takes into account the varying needs of students studying motor engineering, recognising recent changes to the Merchant Navy syllabus and current pathways to a sea-going engineering career, including National diplomas, Higher National Diploma and degree courses.

Pounder's Marine Diesel Engines and Gas Turbines and Gas Turbines Butterworth-Heinemann

This book provides an overview of contemporary trends and challenges in maritime energy management (MEM). Coordinated action is necessary to achieve a low carbon and energy-efficient maritime future, and MEM is the prevailing framework aimed at reducing greenhouse gas emissions resulting from maritime industry activities. The book familiarizes readers with the status quo in the field, and paves the way for finding solutions to perceived challenges. The 34 contributions cover six important aspects: regulatory framework; energy-efficient ship design; energy efficient ship and port operation; economic and social dimensions; alternative fuels and wind-assisted ship propulsion; and marine renewable energy. This pioneering work is intended for researchers and academics as well as practitioners and policymakers involved in this important field.

This book opens a unique and rare perspective of the Oil and Gas industry that focuses on its history and the Scientific and practical studies of raw material issues presents the contribution to the Russian-German raw materials forum. The main theme of the book is problematic issues of subsoil use, whereby the contributions are divided in two

main parts: - Exploration, mining and processing, and - Mining services Paying much attention to complex processes in the mining industry, Scientific and practical studies of raw material issues will be of interest to academics and professional involved or interested in Mining Engineering and Earth Sciences.

This book provides a detailed overview of aspects related to the overall provision chain for biokerosene as part of the global civil aviation business. Starting with a review of the current market situation for aviation fuels and airplanes and their demands, it then presents in-depth descriptions of classical and especially new types of non-edible biomass feedstock suitable for biokerosene provision. Subsequent chapters discuss those fuel provision processes that are already available and those still under development based on various biomass feedstock materials, and present e.g. an overview of the current state of the art in the production of a liquid biomass-based fuel fulfilling the specifications for kerosene. Further, given the growing interest of the aviation industry and airlines in biofuels for aviation, the experiences of an air-carrier are presented. In closing, the book provides a market outlook for biokerosene. Addressing a broad range of aspects related to the pros and cons of biokerosene as a renewable fuel for aviation, the book offers a unique resource.

This book contains a collection of peer-review scientific papers about marine engines' performance and emissions. These papers were carefully selected for the "Marine Engines Performance and Emissions" Special Issue of the Journal of Marine Science and Engineering. Recent advancements in engine technology have allowed designers to reduce emissions and improve performance. Nevertheless, further efforts are needed to comply with the ever increased emission legislations. This book was conceived for people interested in marine engines. This information concerning recent developments may be helpful to academics, researchers, and professionals engaged in the field of marine engineering.

"Advances in Raw Material Industries for Sustainable Development Goals" presents the results of joint scientific research conducted in the context of the Russian-German Raw Materials Forum. Today Russia and Germany are exploring various forms of cooperation in the field of mining, geology, mineralogy, mechanical engineering and energy. Russia and Germany are equally interested in expanding cooperation and modernizing the economy in terms of sustainable development. The main theme of this article collection is connected with existing business ventures and ideas from both Russia and Germany. In this book the authors regard complex processes in mining industry from various points of view, including: - modern technologies in prospecting, exploration and development of mineral resources - progressive methods of natural and industrial mineral raw materials processing - energy technologies and digital technologies for sustainable development - cutting-edge technologies and innovations in the oil and gas industry. Working with young

researchers, supporting their individual professional development and creating conditions for their mobility and scientific cooperation are essential parts of Russian-German Raw Materials Forum founded in Dresden 13 years ago. This collection represents both willingness of young researchers to be involved in large-scale international projects like Russian-German Raw Material Forum and the results of their long and thorough work in the promising areas of cooperation between Russia and Germany.

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