Expert Index Collection

Delivered on Engineering Workbench™

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Tech Spec

The Expert Index Collection by IHS Markit, delivered on Engineering Workbench, is the most comprehensive collection of trusted, authoritative engineering and technical reference content, aggregated and readily accessible in one place, to help engineers, scientists and other technical professionals quickly make the best decisions.

With the Expert Index Collection, engineers, researchers and scientists are able to discover answers across a comprehensive, vetted collection of more than 75 million technical articles, publications, reports, design principles / best practices and more, including more than 100 eBook titles.

The Expert Index Collection is delivered on Engineering Workbench, a unified technical knowledge platform that accelerates technical research and problem solving through single-point access to critical information resources, combined with next-generation search analytics and specialized tools tailored to the needs of technical professionals.

Types of Data: Authoritative Engineering and Technical Reference Sources

The content for the Expert Index Collection is provided by dozens of vetted, authoritative publishers, as well as IHS Markit sources, ensuring that users are able to access trusted content from the best-known and most widely respected publishers.

The Expert Index Collection allows users to leverage the next-generation search capabilities in Engineering Workbench to quickly find answers in relevant reference sources and rapidly make the best decisions.

The Expert Index Collection provides index-level access to all 75+ million documents across dozens of "knowledge bases," or sets of content from individual publishers. "Index-level access" means that users can elect to have relevant documents from all knowledge bases returned in search results for their queries, and users can review information about, or read dynamically generated summaries of, the items returned in their search results.

Some of the content available through the Expert Index Collection is freely accessible in full, and is defined herein as "full-text access content." This means that a user can click through to the full-text original document directly from their search results.

Other content requires a subscription to access, either through IHS Markit or through a third party; this restricted content is defined herein as "index-only content." Users can review information about, and read summaries of, the "index-only content" in their search results. (Users have the option to limit search results to specific knowledge bases, including those that provide them with full-text access.)

More detail on the content included in the Expert Index Collection index follows.

1

Standards Development Organizations (SDOs), Industry Associations and Commercial Content Partnerships

Full-text Access Content – This third-party content is indexed within the Expert Index Collection and will appear, with citations and document summaries, in search results. In addition, users may access to this content via the indicated third-party sites:

- **ArXiv.org** provides access to more than 830,000 e-prints in Physics, Mathematics, Computer Science, Quantitative Biology, Quantitative Finance and Statistics.

- **ClinicalTrials.gov** – ClinicalTrials.gov is a registry and results database of publicly and privately supported clinical studies of human participants conducted around the world. The ClinicalTrials.gov results database was launched in September 2008 to implement Section 801 of the Food and Drug Administration Amendments Act of 2007 (FDAAA 801), which requires the submission of "basic results" for certain clinical trials, generally not later than 1 year after their Completion Date. The results information that is submitted includes the following: Participant Flow; Baseline Characteristics; Outcome Measures and Statistical Analyses; and Adverse Events. ClinicalTrials.gov results are available for free to all users.

- **DSpace@MIT** – DSpace@MIT is MIT's institutional repository built to save, share, and search MIT's digital research materials. DSpace@MIT contains over 25,000 theses and an increasing number of conference papers, images, peer-reviewed scholarly articles, preprints, technical reports, working papers, and more.

- **Defense Technical Information Center (DTIC®)** – DTIC has served the information needs of the Defense community for more than 70 years. DTIC reports to the Assistant Secretary of Defense For Research and Engineering ASD (RE). DTIC's mission is to provide essential, technical research, development, testing and evaluation (RDT&E) information rapidly, accurately and reliably to support our DoD customers' needs. The DTIC knowledge base provides full text searching of final reports on Defense funded research, development, test and evaluation activities.

- **Hindawi Publishing Corporation** – Publishes 500+ open access, peer-reviewed journals. Hindawi's journals maintain the highest standards of peer review, with more than 50,000 internationally-recognized Editors serving on the Editorial Boards of Hindawi's journals. Many of the journals that Hindawi publishes

are included in the leading abstracting and indexing databases, including the Science Citation Index, Scopus, PubMed, INSPEC, Mathematical Reviews, and Chemical Abstracts.

- **IEEE GlobalSpec** — IEEE GlobalSpec is the leading media platform serving the engineering, manufacturing and related scientific and technical market segments. Documents from IEEE GlobalSpec are inclusive of the Product Selection Guides, Technical Library, and the CR4 Forum.
  - o **Product Selection Guides** provide users with domain-expert details on a broad range of products and services that help engineers and related professionals understand key operational parameters, and select proper components and services with the highest levels of accuracy and productivity.
  - o **The Technical Library** contains technical and reference articles from suppliers and textbook abstracts from top scientific and engineering publishers.
  - o **Engineering Web** – Provides no-charge access to 3 million pages of supplier/product and other technical information.
  - o **The Conference Room 4® (CR4)** is a forum for engineers, scientists, technical researchers, technical buyers, students and anyone interested enough in technology to discuss engineering news, seek technical help or get answers to fervent questions. Users can register with IEEE GlobalSpec for free, after which the index and following content is freely accessible: Tech Library, Engineering Web, CR4 Forum, Product Announcements, Newsletters, Specsearch, and Company Profiles.

- **KTA - Nuclear Safety Standards Commission** – The Nuclear Safety Standards Commission (Kerntechnischer Ausschuss - KTA) has the task, to issue nuclear safety standards for topics in the area of nuclear technology where a consensus between experts of the manufacturers and the operators of nuclear power plants, of authorized experts and state officials is apparent and to support their application. The Nuclear Safety Standards Commission (KTA) was founded 1972 by the Bundesministerium für Bildung und Wissenschaft (BMBW; now responsible: Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit - BMU) following the example of the

well-established "Deutsche Dampfkessel-Ausschuss (DDA)". The KTA knowledge base provides access to over 300 Standards and Reports.

- **NASA Tech Briefs** features exclusive reports of innovations developed by NASA and its industry partners and contractors that can be applied to develop new and improved products and solve engineering or manufacturing problems. Authored by the engineers or scientists who did the work, the briefs span a wide array of fields, including electronics, physical sciences, materials, computer software, mechanics, machinery/automation, manufacturing/fabrication, mathematics/information sciences, and life sciences.

- **NASA STI Articles** – STI (scientific and technical information) is the collected set of facts, analyses, and conclusions resulting from scientific, technical, and related engineering research and development efforts, both basic and applied. The NASA Scientific and Technical Information (STI) Program was established to support the objectives of NASA's missions and research. It is dedicated to the advancement of aeronautics and space science. The NASA STI Program acquires, processes, archives, announces, and disseminates NASA STI and acquires worldwide STI of critical importance to NASA and the Nation. The STI Program is a critical component in the worldwide activity of scientific and technical aerospace research and development. Collected from U.S. and international sources, STI is organized according to content prior to being added to the NTRS Registered, which is a world-class collection of STI that includes bibliographic records and a growing number of full-text documents The NASA Scientific and Technical Information knowledge base provides access to the information from the NASA Technical Reports Server (NTRS). NASA Scientific and Technical Information abstracts and documents are available for free to users of Engineering Workbench.

- **National Institute of Standards and Technology (NIST)** – NIST is one of the nation's oldest physical science laboratories. From the smart electric power grid and electronic health records to atomic clocks, advanced nanomaterials, and computer chips, innumerable products and services rely in some way on technology, measurement, and standards provided by the National Institute of Standards and Technology.

- **Nuclear Regulatory Commission (NRC)** - The NRC licenses and regulates the Nation's civilian use of radioactive materials to protect public health and safety, promote the common defense and security, and protect the environment. Specifically, the NRC regulates commercial nuclear power plants; research, test and training reactors; nuclear fuel cycle facilities; and the use of radioactive materials in medical, academic and industrial settings. The agency also regulates the transport, storage, and disposal of radioactive materials and waste, and licenses the import and export of radioactive materials. While the NRC only regulates industries within the United States, the agency works with agencies around the world to enhance global nuclear safety and security.

- **OSTI** is the Department of Energy (DOE) office that collects, preserves, and disseminates DOE-sponsored R&D results that are the outcomes of R&D projects or other funded activities that take place at DOE labs and facilities nationwide and grantees at universities and other institutions. The information is typically in the form of technical documents, conference papers, articles, and software, collectively referred to as scientific and technical information (STI).

- **ResearchWorks at the University of Washington** contains more than 15,000 works in a range of communities including Dissertations and Theses, Faculty and Researcher Data and Papers, Student Research Papers, and the University Libraries Collection.

- **Scientific Electronic Library Online (SciELO)** is a bibliographic database, digital library, and cooperative electronic publishing model of open access journals. SciELO was created to meet the scientific communication needs of developing countries and provides an efficient way to increase visibility and access to scientific literature. 14 countries are currently represented in the SciELO network and its journal collections: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Mexico, Peru, Portugal, South Africa, Spain, Uruguay, and Venezuela. Subject areas covered include: Agricultural Sciences, Applied Social Sciences, Biological Sciences, Engineering, Exact and Earth Sciences, Health Sciences, Human Sciences, along with Literature and Arts.

Index-only Content – This content is indexed within the Expert Index Collection and will appear, with citations and document summaries, in search results. However, access to this third-party content may require additional

subscriptions. Index-only content includes documents from such organizations as:

- **The American Institute of Aeronautics and Astronautics** (AIAA) is the preeminent publisher of cutting-edge aerospace books and journals, and the leading source of aerospace industry archives - dating back to the early 1900's. AIAA titles record the most important developments and the latest research in air and space history. The AIAA Knowledge Base provides index access to more than 69,000 documents from journals, eBooks, meeting papers and the AIAA Education Series.
- **The American Nuclear Society (ANS)** is the premier professional society for the nuclear industry. Online offerings include meeting information, nuclear news, and publications. Separate subscription required to access ANS content.
- **American Society of Agricultural and Biological Engineers (ASABE)** – The American Society of Agricultural and Biological Engineers' mission is to facilitate the exchange of technical information and promoting the science and art of engineering in agricultural, food, and biological systems. Industry documents and journal articles published by the society represent over 70,000 pages of technical content. ASABE documents can be purchased separately.
- **American Society of Mechanical Engineers** – Founded in 1880 as the American Society of Mechanical Engineers, ASME is the premier professional membership organization for more than 127,000 mechanical engineers and associated members worldwide. ASME also conducts one of the world's largest technical publishing operations in the world, offering thousands of titles including some of the profession's most prestigious journals, conference proceedings, and ASME Press books. The ASME Digital Collection, previously known as The ASME Digital Library, is ASME's repository of current and archival literature featuring: ASME's Transaction Journals from 1960 to the present. ASME's Conference Proceedings from 2002 to the present. ASME Press eBooks selected from 1993 to the present. The ASME articles index provides full text indexing of abstracts in the ASME digital collection. Access to the articles requires a subscription or document purchase.
- **ASM International**, formerly known as the American Society for Metals, ASM International is dedicated to serving the materials science and engineering profession. Through its network of 36,000 members worldwide, ASM provides authoritative information and knowledge on materials and processes, from the structural to the nanoscale. Separate subscription required to access ASM content.
- **The American Society of Quality (ASQ)** is a global community of experts and the leading authority on quality in all fields, organizations, and industries. ASQ is a professional association dedicated to advancing the professional development, credentials, knowledge and information services, membership community, and advocacy on behalf of its more than 85,000 members worldwide. The ASQ journal articles include: Journal for Quality Technology, Six Sigma Forum Magazine, Software Quality Professional, Quality Management Journal, Journal for Quality and Participation, Quality Engineering, and Quality Progress Technometrics. Separate subscription required to access certain ASQ content.
- **ASTM International** content includes journals, manuals, and special technical publications (STPs) that are world-class articles and papers for engineering from top researchers in their fields, and is used widely throughout industry and academia. The data covers research articles from metals, petroleum and construction to the environment, forensics and consumer products. Access to ASTM documents requires a separate subscription, or many documents can be purchased individually.
- **Begell House** – Begell House is a source of scholarly publications in the area of science and engineering. Established in 1991, Begell House publishes books, journals, references and conference proceedings focused on various engineering subject areas and on biological sciences. The Begell House Knowledge Base includes close to 6,000 documents drawn from the publisher's collection of journal articles and reference books. Access to full text of these documents requires a separate subscription.
- **Crambeth Allen** – Crambeth Allen Publishing Ltd publishes magazines, books, manuals, directories, websites and events covering engineering, architectural and urban design. Since 1991 Crambeth Allen has been engaged first in contract publishing and, since 1994, in publishing its own titles. The Crambeth Allen articles knowledge base contains an index to articles on two websites:

- o **ePTQ.com:** This site has articles from PTQ magazine since 1998. PTQ is the authoritative magazine covering process technology developments in the refining, gas and petrochemical industries. Each issue of PTQ carries at least 15 in-depth technical feature articles from around the world charting experiences under operating conditions in improving production or safety or meeting environmental targets. It is the practical and detailed nature of these articles that makes PTQ required reading for engineering decision makers everywhere.
  - o **hydrocarbonchina.com**: This website is the bilingual Chinese version of digitalrefining.com which (launched in 2012) is a groundbreaking venture that makes the largest quantity of refining technology information freely available on the web. Access to the articles index is free to all users. Full text access to content on ePTQ requires a subscription. Articles on hydrocarbonchina.com are freely available to users upon registration.
- **Édition Diffusion Presse Sciences (EDP Science)** – EDP Sciences (Édition Diffusion Presse Sciences), a subsidiary of several learned societies, works closely with the scientific world. It specializes in the communication and dissemination of scientific information to specialist audiences alike (general public, decision makers, teachers). EDP Sciences produces and publishes international journals, books and internet sites with a predominantly scientific or technical content. The editorial activities of the company cover Chemistry, Engineering & Technology, General Knowledge, Health Sciences & Dentistry, Life Sciences, Mathematics & Computer Sciences, Physics & Astronomy, Social Sciences & Humanities. EDP Sciences offers a specialist publication platform. The quality of its contents is validated by international scientific committees. The majority of its journals are indexed in the JCR (Journal Citation Reports) by the ISI (Institute for Scientific Information). Access to full text EDP Sciences content requires a subscription.
- **Energy Institute (EI)** – EI is the professional body for the energy industry, developing and sharing knowledge, skills and good practice towards a safe, secure and sustainable energy system. The EI supports over 23,000 individuals working in or studying energy and 250 companies' worldwide, providing learning and networking opportunities to support professional development, as well as professional recognition and technical and scientific knowledge resources on energy in all its forms and applications. The EI was set up in 2003 as a result of a merger between the Institute of Petroleum (IP) and the Institute of Energy (InstE). Both Institutes had a proud and distinguished heritage developed over many years supporting their particular energy sectors. Increasingly these sectors have converged, creating an integrated global energy market which has been mirrored by the development of the Energy Institute - established to address both the depth and breadth of the subject. The Energy Institute knowledge base provides full text searching of more than 800 technical publications. Access to articles requires a subscription.
- **Fire and Blast Information Group** – FABIG was created in March 1992 to continue the collation, appraisal and dissemination of knowledge on hydrocarbon fires and explosions for the design of offshore and onshore facilities. The key activities of FABIG as set out at its inception were to produce specialist design guidance on fire and explosion engineering so as to update the IGN and provide a forum for sharing technical knowledge through Technical Meetings and Newsletters. FABIGS's mission is to disseminate knowledge and best practice, and to develop guidance on the prevention and mitigation of fires and explosions and the protection of people and facilities from such hazards. The FABIG Articles Knowledge Base contains Technical Notes, Technical Meeting Proceedings, Newsletters and more. Access to some FABIG documents may require a membership or purchase.
- **IEEE — The Institute of Electrical and Electronics Engineers** (IEEE) is the world's largest technical professional society and a leading authority on technology-related matters ranging from aerospace systems, telecommunications and computers, to biomedical engineering, electric power and consumer electronics. The IEEE publishes 30 percent of the world's literature in the electrical and electronics engineering and computer science fields, and has developed nearly 900 active industry standards. Access to IEEE documents requires a separate subscription via IEEE, or documents can be purchased individually.
- **International Association of Plastics Distribution (IAPD)** – IAPD, established in 1956, brings together distributors, fabricators, manufacturers, manufacturer's

representatives, recyclers and service providers in an environment which encourages a free flow of ideas and information that help members build their businesses. IAPD provides training, connections with customers and suppliers and information about developments that impact the industry. What makes IAPD unique is a commitment to educating customers and other key end users about plastics. The IAPD knowledge base provides index access to articles from the IAPD Magazine, Designing with Plastics newsletter, and other technical materials and resources. Access to full text IAPD content requires a subscription.

- **International Civil Aviation Organization (ICAO)** – ICAO is a UN specialized agency, established by States in 1944 to manage the administration and governance of the Convention on International Civil Aviation (Chicago Convention). ICAO works with the Convention's 191 Member States and industry groups to reach consensus on international civil aviation Standards and Recommended Practices (SARPs) and policies in support of a safe, efficient, secure, economically sustainable and environmentally responsible civil aviation sector. These SARPs and policies are used by ICAO Member States to ensure that their local civil aviation operations and regulations conform to global norms, which in turn permits more than 100,000 daily flights in aviation's global network to operate safely and reliably in every region of the world. In addition to its core work resolving consensus-driven international SARPs and policies among its Member States and industry, and among many other priorities and programmes, ICAO also coordinates assistance and capacity building for States in support of numerous aviation development objectives; produces global plans to coordinate multilateral strategic progress for safety and air navigation; monitors and reports on numerous air transport sector performance metrics; and audits States' civil aviation oversight capabilities in the areas of safety and security. The ICAO Knowledge Base provides index access to ICAO Journals, MRTD Reports, Annual Reports of the Council and Doc Series publications. Access to full text ICAO content requires a purchase or subscription.

- **The IUCr, International Union of Crystallography**, is an International Scientific Union promoting international cooperation in crystallography, promoting international publication of crystallographic research, facilitating the standardization of methods, units, nomenclatures and symbols and forming a focus for the relations of crystallography to other sciences. Separate subscription required to access IUCr content.

- **The Institute of Physics (IOP)** provides access to more than 340,000 research articles from 58 of the world's leading research institutes, including Journal of Biofabrication, Journal of Geophysics & Engineering, and the Journal of Nanotechnology. Separate subscription required to access IOP content.

- **The Institution of Chemical Engineers (IChemE)** is the global professional membership organization for people with relevant experience or an interest in chemical engineering. IChemE's broad range of technical and general publications is essential reading for all process professionals. Publications indexed as part of this Knowledge Base include: the Loss Prevention Bulletin, which provides detailed reports on accidents in the process industries, as well as examples of best practice; IChemE's journal archive containing over 70 years of essential research and over 3,000 original papers published to the highest peer-reviewed standards; and, the Hazards symposium archive that covers topics such as inherently safer design, safety management systems, risk assessments and analyses, and the human behavioural aspects of safety in the process industry. The iChemE Articles knowledge base contains close to 1,000 documents from the Loss Prevention Bulletin. Access to full text iChemE content requires a purchase or subscription.

- **InterRegs** is the premier online resource for up-to-date, global vehicle safety and emissions regulations. If you are an OEM, an automotive component manufacturer or a supplier to the vehicle manufacturing industry, you don't have to struggle to search for up-to-date vehicle regulations - InterRegs does all that for you. All documents are also translated into English and constantly kept up to date. Automotive regulations for sixty countries and subjects are covered. This includes regulatory information on vehicle emissions, vehicle noise, occupant protection, pedestrian protection, type approval/certification and more. Also covered are off-highway construction equipment regulations and non-road engine emission regulations. Whether you require passenger car regulations, bus regulations, motorcycle regulations, truck regulations or off-highway regulations, InterRegs can help you save time and money searching. Access to full text InterRegs content requires a subscription.

- **Maney Journals** – Maney Publishing, formed in 1997, is a leading independent publisher of academic and professional journals. Specializing in materials science and engineering, health and life sciences, and the humanities, Maney is committed to technical and editorial innovation for the international dissemination of peer-reviewed scholarship and research. Maney's portfolio includes more than 150 scholarly journals, most published in partnership with societies, universities, and institutes. This knowledge base contains more than 100,000 journal articles that are part of the Maney Journals collection. Access to full text Maney Journals requires a subscription.

- **MATDAT Materials Database** – MATDAT is a material properties database that contains over 1,500 detailed datasets with properties of design-relevant metallic materials. The database includes standard and advanced material properties (cyclic, fatigue - strain-life, stress-life) and all material data are from relevant, published literature (and fully referenced). The content in the database is divided into the following groups: unalloyed steels, low-alloy steels, high-alloy steels, aluminium alloys, titanium alloys, cast irons/steels, weld materials, other (copper alloys, etc.) Access to the material information on MATDAT requires a subscription.

- **McGraw-Hill AccessScience** – A subscription to McGraw Hill's Access Science includes access to more than 8,000 articles on various topics related to science and technology – a veritable online science encyclopedia. Separate subscription required.

- **National Fluid Power Association (NFPA)** -– The National Fluid Power Association was formed in 1953. NFPA's mission and priorities include: connecting the fluid power community, increasing the use of fluid power intelligence, growing the fluid power workforce, and promoting innovative use of fluid power. The NFPA Fluid knowledge base provides index access to more than 2,000 technical papers presented at National Conference on Fluid Power (NCFP) conferences covering 1947 through 2008. The papers are the work of distinguished technical and engineering professionals in the fluid power industry.

- **OnePetro.org**, operated by the Society of Petroleum Engineers, is a multi-society library, which provides access to 85,000 documents of technical literature related to the oil and gas exploration and production industry from participating organizations including: American Petroleum Institute (API), American Rock Mechanics Association (ARMA), American Society of Safety Engineers (ASSE), International Petroleum Conference (IPTC), International Society for Rock Mechanics (ISRM), Offshore Technology Conference (OTC), NACE International (corrosion engineers), National Energy Technology Laboratory (NETL), Petroleum Society of Canada (PETSOC), Pipeline Simulation Interest Group (PSIG), Society of Petroleum Engineers (SPE), Society of Petroleum Evaluation Engineers (SPEE), Society of Petrophysicists and Well Log Analysts (SPWLA), The Society of Underwater Technology (SUT), and the World Petroleum Council (WPC). Separate subscription required to access OnePetro.org content.

- **PCI Industrial Computer Manufacturers Group (PICMG)** is a nonprofit consortium of companies and organizations that collaboratively develop open standards for high performance telecommunications, military, industrial, and general purpose embedded computing applications. There are over 250 member companies that specialize in a wide range of technical disciplines, including mechanical and thermal design, single board computer design, very high speed signaling design and analysis, networking expertise, backplane and packaging design, power management, High Availability software, and comprehensive system management. Equipment built to PICMG standards is used worldwide and anyone can build or use equipment without restriction (although certain technologies used for some military applications may be subject to U.S. export restrictions governed by ITAR rules). Key standards families developed by PICMG include CompactPCI®, AdvancedTCA®, MicroTCA®, AdvancedMC®, CompactPCI® Serial, COM Express®, SHB Express®, and HPM (Hardware Platform Management). The PICMG Articles Knowledge Base contains information related to PICMG Open Standards and the online catalog of products from PICMG member companies. Access to the articles index is free to all users. Full text access to PICMG standards/specifications requires a purchase.

- **PLASA** is the lead international membership body for those who supply technologies and services to the event, entertainment and installation industries. The association, which operates from offices in Europe and North America, has over 1,200 members and acts as the worldwide voice for the industry, providing a wide

range of business resources, technical support and commercial benefits to its members. PLASA is actively involved in the development of standards and directives worldwide. PLASA owns and manages the PLASA Show and PLASA Focus events and publishes leading industry magazines Lighting&Sound America, Lighting&Sound International and Protocol. Access to full text PLASA content requires a subscription.

- **Proceedings of the National Academy of Sciences (PNAS)** is one of the world's most-cited and comprehensive multidisciplinary scientific journals, publishing more than 3,100 research papers annually. Established in 1914, PNAS publishes cutting-edge research, science news, Commentaries, Reviews, Perspectives, Colloquium Papers, and actions of the National Academy of Sciences. The journal's content spans the biological, physical, and social sciences and is global in scope. Nearly half of all accepted papers come from authors outside the United States. PNAS publishes only the highest quality scientific research. Every published paper is peer reviewed and has been approved for publication by an NAS member. Submissions are accepted from all researchers; authors do not need to have a connection to an NAS member to publish in PNAS. The PNAS knowledge base provides full text searching of more than 100,000 technical publications. Access to most recent articles requires a subscription.

- **ProjectEuclid@Duke University** – Duke University Press publishes approximately 120 books annually and over 40 journals, including several electronic collections. Euclid Prime is a collection of high-impact, peer-reviewed journals in theoretical and applied mathematics. Separate subscription required to access ProjectEuclid content.

- **PubMed** – developed by the National Center for Biotechnology Information (NCBI), comprises over 20 million citations for biomedical literature from MEDLINE (Medical Literature Analysis and Retrieval System Online), life science journals, and online books. PubMed citations and abstracts include the fields of medicine, nursing, dentistry, veterinary medicine, the health care system, and preclinical sciences. PubMed is developed by the National Center for Biotechnology Information (NCBI), at the U.S. National Library of Medicine (NLM), located at the National Institutes of Health (NIH).Separate subscription required to access PubMed content.

- **Royal Aeronautical Society** is the world's only professional body dedicated to the entire aerospace community. Established in 1866 to further the art, science and engineering of aeronautics, the Society has been at the forefront of developments in aerospace ever since. The Royal Aeronautical Society Articles knowledge base provides access to a variety of different publications including journal articles, conference proceedings and discussion papers. Access to full text Royal Aeronautical Society Articles and Publications requires a subscription.

- **SAE International** is a global association of more than 128,000 engineers and related technical experts in the aerospace, automotive and commercial-vehicle industries. SAE International's core competencies are life-long learning and voluntary consensus standards development. Access to SAE documents requires a separate subscription.

- **Society of Automotive Engineers of Japan (JSAE)** was founded on February 1, 1947. Its aims are to promote scientific culture, expand the industrial economy, and improve the quality of people's lives by furthering the development of automobile science and technology. The organization comprises a number of committees under the Boards of Technology, Publishing, Standards, Education and Planning. Members of each committee voluntarily participate in a range of activities in order to exchange information on automotive technologies and to pursue innovation. The JSAE knowledge base provides full text searching of JSAE Articles and Proceedings. Access to articles requires a subscription.

- **Society for Industrial and Applied Mathematics (SIAM)** is an international community of over 13,000 individual members. Almost 500 academic, manufacturing, research and development, service and consulting organizations, government, and military organizations worldwide are institutional members. SIAM fosters the development of applied mathematical and computational methodologies needed in these various application areas. Applied mathematics in partnership with computational science is essential in solving many real-world problems. Through publications, research, and community, the mission of SIAM is to build cooperation between mathematics and the worlds of science and technology. SIAM publishes 16 peer-reviewed journals. Approximately 25 books are

also published each year by SIAM. Access to SIAM journal articles requires a subscription.

- **The Society for the Advancement of Material and Process Engineering (SAMPE)**, an international professional member society, provides information on new materials and processing technology either via technical forums, journal publications, or books in which professionals in this field can exchange ideas and air their views. Separate subscription required to access SAMPE content.
- **SPIE, the International Society for Optics and Photonics**, publishes the SPIE Digital Library, containing research papers from the Proceedings of SPIE and the Society's 9 scholarly journals. Separate subscription required to access SPIE content.
- **Springer for R&D** content includes coverage of science, technology, business and architecture. Access to Springer content requires separate subscription. Springer (available in English, French, German)
- **The SpringerMaterials database**, based on the Landolt-Börnstein new series, is available for subscription access as part of Knowledge Collections. Springer Science+Business Media is a leading global scientific, technical and medical publisher, providing researchers in academia, scientific institutions and corporate R&D departments with quality content via innovative information products and services.
- **Techniques de L'Ingenieur** represents the largest collection of scientific and technical literature in French, covering topics Industrial Computing, Measurement Analysis, Quality and Safety, Embedded Systems, Metrology, Nanotechnology, automation, sensors, and a broad range of analysis techniques. Separate subscription may be required to access Techniques de L'Ingenieur content.
- **Total Materia by Key to Metals AG** – Engineers and others use Total Materia to quickly obtain accurate, up-to-date and verified material property data. Total Materia, from Key to Metals, is the world's most comprehensive materials database, available in 26 languages and covering metals, polymers, ceramics and composites with data updated monthly, so engineers always have access to the most current information available. In total, covers more than 12 million properties from over 450,000 materials.
- **Transportation Research Board** – The mission of the Transportation Research Board - one of six major divisions of the National Research Council - is to promote innovation and progress in transportation through research. TRB's varied activities annually draw on over 7,000 engineers, scientists, and other transportation researchers from the public and private sectors and academia, who contribute expertise in the public interest by participating on TRB committees, panels, and task forces. TRB disseminates transportation research results and technology information including books and reports assessing the state of the art or practice in specific areas of transportation functions, disciplines, and modes. The TRB index provides access to more than 50,000 papers, journal articles, reports, circulars, and conference proceedings. Access to full text TRB content requires a subscription.
- **TWI** – TWI is one of the world's foremost independent research and technology organizations, with expertise in materials joining and engineering processes as applied in industry. TWI specializes in innovation, knowledge transfer and in solving problems across all aspects of manufacturing, fabrication and whole-life integrity management. The TWI Articles Knowledge Base contains Published Papers, Case Studies, Best Practice Guides, Technical Literature Reviews and more. Access to some TWI documents may require a membership or purchase via TWI.
- **Wiley Journals** – Wiley is a global provider of content-enabled solutions that improve outcomes in research, education, and professional practice. Wiley produces scientific, technical, medical, and scholarly journals, reference works, books, database services, and advertising; professional books, subscription products, certification and training services and online applications; and education content and services. The Wiley Journals knowledge base includes close to 4 million articles covering multiple subject areas to include: Agriculture, Aquaculture & Food Science; Architecture & Planning; Chemistry; Computer Science & Information Technology; Earth, Space & Environmental Sciences; Life Sciences; Mathematics & Statistics; Medicine; Physical Sciences & Engineering; Veterinary Medicine. Access to Wiley Journals requires a subscription.

IHS Markit Content Sources (Full-text Access Content)
Technical Web Collection by IHS Markit — This collection provides a pre-indexed subset of over seven million documents from both Deep Web sites (World Wide

Web content that is not part of the Surface Web) and the Surface Web. These sites include scientific and technical information from government, academic, commercial, and professional databases and documents that cannot be easily accessed by conventional web searches.

Scientific Effects by IHS Markit — Scientific Effects by IHS Markit stimulate creative problem-solving by providing access to a proprietary database of over 9,000 scientific theorems, laws, phenomena, and processes from major disciplines. Practical industry applications are included as examples to help you with implementing solutions in your design.

IHS Markit Content Sources (Index-only Content)

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