建設分野を中心とした市場開発活動を展開
Market development activities target mainly the construction sector

2014年度は、新たな市場開発活動として「国土強靭化委員会」を設置し、広く国内各地域の防災水準の向上に貢献すべく、冊子『鋼構造による国土強靭化に資するご提案』を取りまとめ、これを活用して、鉄鋼業界が培ってきた鋼構造の技術・工法を活用した提案・普及活動を推進した。

各分野ごとに重点的に取り組んだ活動を例示すると、建築分野では、「長周期地震動を受ける鋼部材の疲労特性解明」など、鋼構造の安全性・競争力の向上を目指す研究を継続するとともに、鉄構業団体と連携した公共建築物の鋼構造化推進や、耐火構造認定の適用鋼種拡大推進など普及活動を活発に実施した。

土木分野では、地震・津波対策など、国土強靭化に資する鋼材の利用技術開発を継続・推進しており、海岸保全施設や河川堤防等をターゲットに港湾空港技術研究所・大学に研究委託し、「防波堤や防潮堤を粘り強くする工法」や「鋼矢板を用いた堤防補強工法・堤体内液状化対策工法」などの実用化に向けた実験・解析を推進した。

橋梁分野では、今後経年劣化が顕在化する鋼橋について、補修・予防保全などによる延命化や機能向上などに向けた取り組みを推進した。

環境分野では、建設用鋼材のリサイクル性などの優れた環境性能への認知度向上と普及促進のため、「グリーン・スチール・セミナー」開催をはじめとする情報発信・PR活動を実施した。

また、1995年度以降、鋼構造に関する研究の活性化と健全な普及促進を目的に、鋼構造及びその周辺技術に関わる研究者に対する鋼構造研究・教育助成事業を継続している。

海外市場関連では、海外向け鋼構造PR誌“Steel Construction Today & Tomorrow”を年3回発行し、東南アジアを中心に広く配布するとともに、鉄連ウェブサイトにも掲載した。あわせて今後の企画内容に活かすべく読者向けアンケートを継続実施した。また、アジア諸国における鋼構造の普及促進のため、カンボジアにおいて鋼構造建設セミナーを同国公共事業運輸省、カンボジア工科大学との共催により実施した。

その他、造船用耐食鋼の適用のための対応を検討し、スチール缶の普及活動やファインスチール（建材用亜鉛めっき鋼板）の技術課題の検討および普及活動なども進めた。

One new JISF market development activity in fiscal 2014 was the establishment of the National Resilience Committee. To help make Japan better prepared for natural disasters, a booklet titled Proposal for National Resilience by Using Steel Structures was produced. The JISF used this publication to offer ideas for the use of steel structure technologies and construction methods created by the steel industry.

In the building construction sector, research continued on ways to improve the safety and competitiveness of steel structures. For instance, one research project aims to determine the mechanism of wear for steel that is subjected to long-period earthquake ground motion. Other activities include promoting the use of steel structures for public-sector buildings in cooperation with Japan Steel Fabricators Association, and increasing the use of steel grades that meet the requirements for certified fire-resistant structures.

In the civil engineering sector, the JISF continues to work on the development of technologies for using steel to help make Japan more resistant to earthquakes, tsunamis and other disasters. The JISF is also promoting the use of these technologies. Research involving shore protection, river levees and other subjects was outsourced to Port and Airport Research Institute and universities. Experiments and analysis are moving forward for the practical use of new construction methods. This includes a method for making levees and shoreline protection structures stronger and a method for using steel sheet piles to prevent the liquefaction of levees.

For bridges, the JISF is involved with programs to extend the lives and improve the performance of the many aging bridges in Japan with reinforcement, prevention and other activities.

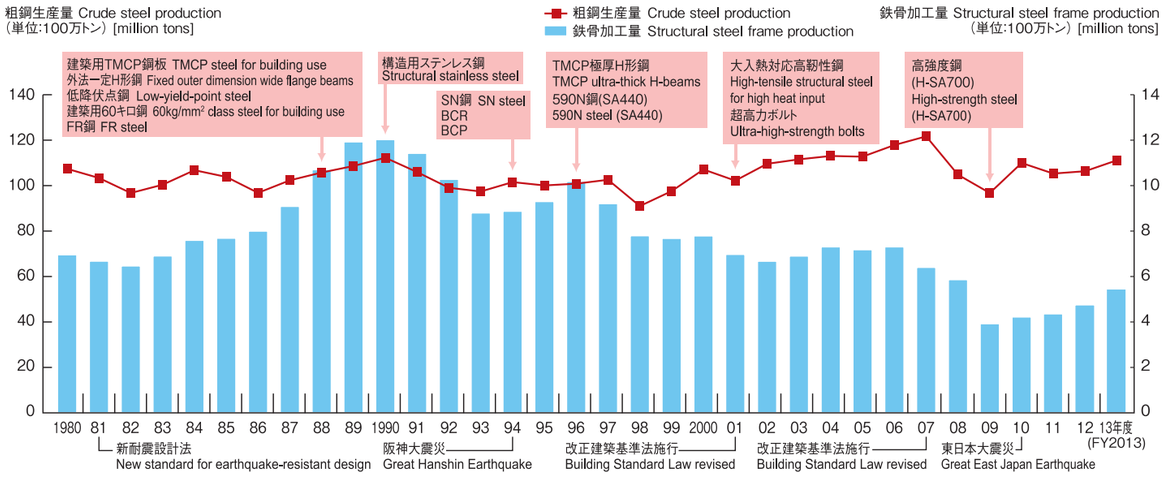
In the environmental sector, the JISF provided information on the high adaptability for recycling and other properties of steel products for construction, and conducted public relations activities including the Green Steel Seminar.

Since fiscal 1995, the JISF has been providing support for steel structure research and education programs for individuals engaged in research involving steel structures and associated technologies. The objectives are to increase the amount of steel structure research and encourage more use of these structures in a sound manner.

For overseas markets, the JISF issues the promotional publication Steel Construction Today & Tomorrow three times each year for distribution primarily in Southeast Asia. All issues are posted on the JISF website. A readership survey was conducted to gather feedback that can be used to improve upcoming issues. To promote the use of steel structures in Asian countries, the JISF held a conference in Cambodia co-sponsored with the Ministry of Public Works and Transport of Cambodia and the Institute of Technology of Cambodia.

In addition to these activities, the JISF examined ways for utilizing corrosion-resistant steel for shipbuilding, promoted the use of steel cans, and studied technological issues involving “fine steel” (galvanized steel sheets for the construction sector) and promoted the use of these sheets.

● 粗鋼生産量と鉄骨加工量 Crude Steel Production and Structural Steel Frame Production

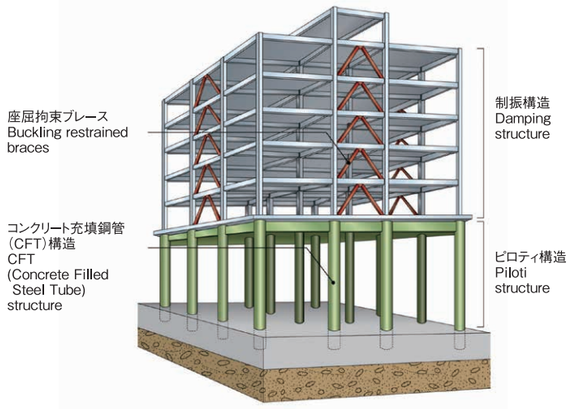


出所:（粗鋼生産量）経済産業省「鉄鋼・非鉄金属・金属製品統計月報」、（鉄骨加工量）全国鐵構工業協会
Source: (Crude Steel Production) "Monthly Report of Iron and Steel, Non-ferrous Metals, and Fabricated Metals Statistics," Ministry of Economy, Trade and Industry;
(Steel Frames Fabricated) Japan Steel Fabricators Association

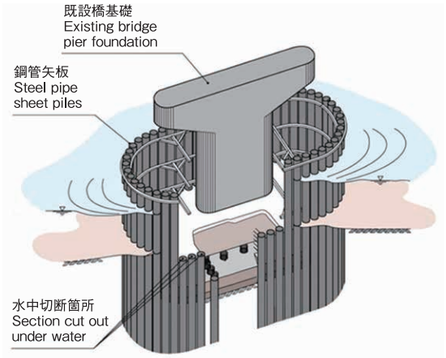
● 「国土強靭化」に資する鋼構造技術・工法の例
Examples of steel structure technologies and construction methods for making Japan more resistant to natural disasters

●津波避難施設 Tsunami Shelter

●防災拠点ビル Disaster Prevention Facility



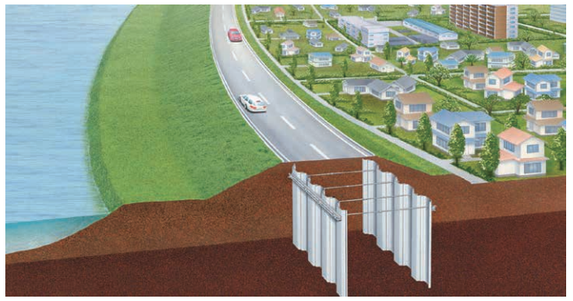
●鋼管矢板による既設橋基礎の耐震補強構造（鋼管矢板井筒基礎工法）
Use of steel pipe sheet piles for seismic reinforcement of an existing bridge foundation (steel pipe sheet pile cylinder foundation method)



既設基礎の周囲に鋼管矢板を打設し、既設基礎と一体化させることにより、耐震強度を向上する工法

Steel pipe sheet piles are placed around the existing foundation to create a unified structure that is more resistant to earthquakes.

●鋼矢板による堤防補強構造（二重締め切り鋼矢板工法）
The levee reinforcement using steel sheet piles (double steel sheet pile wall method)



堤防や盛土内に鋼矢板を設置し、地盤との複合構造とすることで、災害に対して強固な河川や海岸の堤防を構築する工法

Steel sheet piles are placed within the levee to create an integrated structure with the ground. This allows building levees and shoreline protection structures that are better able to withstand natural disasters.

●最近の市場開発活動紹介パンフレットの例
Brochures with information about recent market development activities by the JISF

①鋼構造による国土強靭化に資するご提案：防減災に貢献する19の鋼構造技術・工法を紹介。
Proposal for National Resilience by Using Steel Structures: 19 steel structure technologies and construction methods for disaster prevention and the reduction of damage

②鉄がサポートするこれからの公共建築物：防災拠点機能や将来的な用途・レイアウト変更等、これからの学校、庁舎、病院等公共建築物に求められる機能を実現する鉄骨造建築のメリットを紹介。
The role of steel in new public-sector buildings: Why steel structures can provide the functions required by new public-sector buildings (schools, city halls, hospitals, etc.); disaster response bases, future applications, layout revisions and other issues

③高性能鋼の概要（橋梁向け）：高強度、耐候性など橋梁用高性能鋼の概要・材料特性・効果・適用例を紹介。
High Performance Steels(For Bridge Construction): Information about strength, toughness and weldability, corrosion resistance,benefits and examples of where this steel is used

④鉄の輪がつなぐ人と地球-環境にやさしい社会を支える建設用鋼材の勧め-：環境にやさしい建設を可能とする建設用鋼材の製造段階から使用段階に至るまでの様々な工夫と取組み、特長について紹介。
Human and the Earth joined by *Iron Cycle* - Recommendation of steel products for construction that supports environmentally friendly society

⑤STEEL CONSTRUCTION TODAY & TOMORROW：年3回発行の英文鋼構造建設技術情報誌。アジア諸国の読者向けに中国・ベトナムなど計6言語の翻訳テキストも作成。
Steel Construction Today and Tomorrow: This English-language publication of steel construction technologies is issued three times each year. The text versions of six Asian languages are also available.

※②以外は、鉄連ウェブサイトにPDF版を掲載。
*All issues except ② can be viewed as PDF files on the JISF website.