

一般経済 The Japanese Economy

2016年のわが国経済は緩やかな回復基調を辿った。雇用・所得環境は良好な状態を保ったものの、個人消費は盛り上がりには欠け、企業の設備投資は英国のEU離脱決定など外需の先行き不透明感から力強さを欠いた。輸出は前半は伸び悩んだものの、秋以降回復の動きがみられた。この結果、2016年の実質GDP成長率は1.0%となった。

生産 Production

2016年の粗鋼生産は、年初は国内需要の低迷により落ち込みが続いたものの、春先以降、建設や自動車需要に持ち直しの動きがみられたことから緩やかな回復軌道を辿った。また、在庫調整の進展も加わり、年後半から粗鋼生産の回復は力強さを増したものの、年計では前年比36万トン、0.3%減の1億478万トンと2年連続の減少となった。

国内需要 Domestic Supply and Demand

2016年の国内鉄鋼需要を鋼材受注から見ると、普通鋼鋼材受注のうち建設向けは公共工事が堅調に推移したことから3年ぶりに前年実績を上回った。製造業向けも自動車の国内への生産移管や機械需要の回復などから2年ぶりに前年水準を上回り、合計では3年ぶりに増加した。特殊鋼鋼材受注は2年ぶりに増加した。

輸出入 Steel Trade

2016年の全鉄鋼輸出は前年比1.0%減の4,121万トンと7年連続で4,000万トンを超えたとなったが、前年比では3年連続の減少となった。全鉄鋼輸入は、前年比0.9%増の810万トンと2年ぶりの増加となった。このうち、普通鋼鋼材は同1.5%減の427万トンと2年連続で減少となったものの、6年連続で400万トンを超える水準となった。

原料・物流 Raw Materials and Logistics

2016年の鉄鉱石の輸入量は1億3,002万トンで前年比94万トン、0.7%減と2年連続の減少となった。一方、原料炭の輸入量は5,995万トンで前年比189万トン、3.3%増と3年ぶりの増加となった。

2016年の鉄鋼製品の輸送形態（一次輸送）は、内航船が66.8%、トラックが32.9%の比率構成だった。なお、同年の粗鋼生産量は前年比0.3%減と2年連続で前年実績を下回ったこともあり、貨物輸送量は前年比横ばい（0.009%減）となった。

地球温暖化対策 Initiatives to Fight Global Warming

日本鉄鋼業は2013年度以降の自主的取り組みとして「低炭素社会実行計画」を推進している。同計画においては、エコプロセス、エコプロダクト、エコソリューション、革新的技術開発を計画の4本柱として世界最高水準のエネルギー効率の更なる向上を図るほか、優れた製品や省エネ技術を世界に普及する地球規模での温暖化対策に積極的に取り組んでいる。

リサイクル Recycle

日本鉄鋼業は、鉄スクラップを鋼材に再生する製品リサイクルのほか、鉄鋼副産物（スラグ、ダスト、スラッジ）の資源化、廃プラスチックや廃タイヤの受け入れ・再利用といった多様なリサイクルにより資源の有効利用を推進し、産業廃棄物の最終処分量の減量化に資するなど、循環型社会の構築に向け積極的に貢献している。

The Japanese economy recovered slowly during 2016. Employment and personal income were firm, but consumer spending lacked momentum. Corporate capital expenditures were sluggish due to the uncertain outlook for external demand caused by Brexit and other events. Exports were lower in the first half but started recovering in the fall. As a result, Japan’s real GDP growth in 2016 was 1.0%.

In 2016, crude steel output in Japan continued to decline early in the year as domestic demand was weak. But output slowly began to recover in the spring along with a rebound in demand in the construction and automobile industries. The recovery in crude steel output gained momentum in the second half in part due to progress with inventory reductions. Total output fell for the second consecutive year, decreasing 0.3% (360,000 tons) to 104.78 million tons.

Domestic demand for ordinary steel based on orders received increased for the first time in three years. Construction demand rose for the first time in three years, mainly because of solid demand for steel used in public works projects. In the manufacturing sector, steel demand was higher for the first time in two years as automakers shifted production to Japan and demand for machinery recovered. Specialty steel orders rose for the first time in two years.

Japan’s iron and steel exports in 2016 decreased for the third consecutive year, declining 1.0% to 41.21 million tons but remaining above 40 million tons for the seventh consecutive year. Imports increased for the first time in two years, rising 0.9% to 8.10 million tons. Ordinary steel imports decreased 1.5% to 4.27 million tons, falling for the second consecutive year, but remained above 4 million tons for the sixth consecutive year.

Iron ore imports in 2016 decreased for the second consecutive year, declining 0.7% (940,000 tons) to 130.02 million tons. Imports of metallurgical coal were up for the first time in three years, climbing 3.3% (1.89 million tons) to 59.95 million tons.

By mode of primary transportation, coastal vessels accounted for 66.8% of gross shipments of steel products and trucks for 32.9%. Furthermore, also because crude steel output in 2016 decreased for the second consecutive year (down 0.3%), the steel product primary transportation volume was largely unchanged (down 0.009%).

As one way to fight global warming, the Japanese steel industry is going ahead with the “Commitment to a Low Carbon Society” as a new voluntary initiative that started in fiscal 2013. There are four central components: eco-process, eco-product, eco-solution and the development of innovative technologies. One goal is to further improve the steel industry’s energy efficiency, which is the highest in the world. Another goal is to contribute to the fight against global warming by increasing the use of Japan’s outstanding steel products and energy conservation technologies around the world.

The Japanese steel industry recycles products by using steel scrap to fabricate steel. In addition, by-products of steelmaking processes (slag, dust and sludge) are reused and waste plastics and scrap tires are used at steel mills. A variety of recycling programs facilitate the effective use of many materials. By using these activities to reduce industrial waste going to landfills and make other improvements, the steel industry is helping in many ways to create a recycling oriented society.

設備・技術 Equipment and Technology

日本鉄鋼業は、各製造プロセスの一層の生産性向上を図りながら、鉄鋼製品に対するユーザーの多様化・高度化するニーズに応じた高級鋼化に向けた技術開発を進めている。また、2008年度より、2050年に向けた製鉄プロセスにおける抜本的なCO<sub>2</sub>排出削減を目指す「環境調和型製鉄プロセス技術開発（COURSE50）」を推進している。

財務 Financial Affairs

鉄鋼各社の2016年度の収益は、4-6月期を底に鉄鋼需要が回復したことから、鋼材出荷量も前年度から増加すると見込まれているものの、年度前半における鋼材市況回復の遅れや、下期における原料価格高騰の影響などから、売上高および経常利益は前年度比減となる見通しである。2016年度の設備投資は、前年度比14.5%増、6,371億円の計画である。

労働 Industrial Relations

2016年の鉄鋼業の従業者数は17.6万人と2年連続で増加した。また、月平均の総労働時間は3年連続で170時間を超えた。一方、安全衛生に関しては、2006年に設置した『安全衛生推進本部』の下、業界をあげた災害防止活動に取り組んでおり、労働災害は長期的にみて減少傾向を示している。

海外 Overseas

2016年の世界経済はGDP成長率+3.1%と2年連続で鈍化した。2017年の成長率は+3.5%と、新興国・途上国を中心に回復へ向かうと予想される。また、2016年の世界粗鋼生産量は16.3億トン（前年比0.9%増）となった。世界的な鉄鋼製品の供給過剰による需給不均衡を是正するため、鉄鋼過剰生産能力問題の解消が喫緊の課題となっている。

市場開発 Market Development

2016年度の市場開発活動として、既存施設の老朽化・長寿命化対策、津波・液状化対策などの技術的課題について、産学共同で研究活動を推進するとともに、これまで鉄鋼業が培ってきた鋼構造技術・工法などの提案、基準化・法制化に向けた取り組みなどを展開。あわせて、海外での鋼構造の普及とインフラの改善などに資するため、カンボジアにおいて技術普及セミナーなどを開催した。

標準化 Standardization

2016年度は、JISは、制定1、改正16および廃止2を行った。また、平成24年末から行ってきた鉄鋼業界法のJISへの取り込みが完了した。ISO規格は、制定11、改正30および廃止7を行った。特に、ぶき関連のJISおよびISO規格の改正では、日本がISO幹事国となってISO規格を改正し、その内容をJISに反映した。鉄鋼標準物質（JSS）は、5品種の販売を開始した。

The Japanese steel industry is constantly developing technologies to supply high-grade steel that can meet the diversifying and exacting requirements of companies that use steel products. At the same time, steelmakers are achieving more productivity gains in all manufacturing processes.

Fiscal 2008 was the beginning of a project called COURSE50 (CO<sub>2</sub> Ultimate Reduction in Steelmaking Process by Innovative technology for cool Earth 50), which has the goal of achieving a substantial reduction in CO<sub>2</sub> emissions associated with ironmaking by 2050.

Steelmakers expect fiscal 2016 sales and ordinary income to be lower than in the previous fiscal year. The volume of steel shipments is expected to increase along with the recovery in steel demand that started in the July-Sept quarter. However, the slow pace of the recovery in steel product prices in the first half and the sharp increase in the cost of raw materials in the second half held down sales and earnings. Capital spending in fiscal 2016 is expected to increase 14.5% to ¥637.1 billion.

The Japanese steel industry had a workforce of 176,000 in 2016 for the second straight year of increase. Average monthly working time surpassed 170 hours for the third consecutive year. Under the auspice of the Committee on Promoting Safety and Hygiene that was established in 2006, the steel industry has been engaged in many activities to prevent occupational accidents. Due to these consistent activities, a long-term declining trend in such accidents has been accomplished.

World GDP growth slowed down to 3.1% in 2016 for the second consecutive year. World economy is expected to grow by 3.5% in 2017, supported by economic recoveries in emerging market and developing countries. Global crude steel output grew by 0.9% to 1.63 billion tons. To alleviate the imbalance between supply and demand in the global steel industry caused by the oversupply of steel products, it is urgently necessary to address excess capacity.

Market development in fiscal 2016 included joint academic/corporate sector research activities involving technologies for aging steel mill equipment and extending the life of this equipment. Research also covers measures for tsunamis, soil liquefaction and other disaster-related issues. In addition, there were activities involving new ideas for steel structure technologies and construction methods that the steel industry has created. Market development includes the establishment of associated standards and laws and regulations. To increase the use of steel structures and improve infrastructures in other countries, there were programs to promote the use of technologies and a seminar in Cambodia as well as other activities.

In fiscal 2016, one JIS (Japan Industrial Standard) was established, 16 were revised and 2 were withdrawn. The work consolidating internal standards ("Gyokai- ho") into JISs that started at the end of 2012 has now been completed. Most significantly, the JISF has taken charge of the secretariat and terminated the revision of ISO standards regarding tin mill products. The revision of ISO standards was incorporated in JISs. In addition, the JISF started selling five certified reference materials.