Construction market trends

United States  Indicators point to stronger activity in the residential sector vis-a-vis the private non-residential sector.

Supported by record low interest rates, residential starts jumped 22.6% in July and the most since October 2016. Building permits reached levels last seen in February 2020. The Architectural Billings Index (ABI) remained at June levels and at 40 (<50, contraction). New project inquiries fell slightly from 49.3 in June to 49.1 in July; design contracts declined more notably from 44.0 in June to 41.7 in July.

United States: Building permits vs residential construction put in place
Source: US Census, McKinsey & Company

China  China: indicators point to the continued pickup in the real estate sector and parts of infrastructure.

Newly started floor space continued to grow in July, with the 3 month moving average y-o-y growth up 7.5%. During the same period, floor space sold was up 6%. In the infrastructure segment, railway and road transport are up 5.7% and 2.7% respectively on a year to date basis y-o-y, while civil aviation is down -35%.

China: Residential floor space started (3 month moving average, % y-o-y)

Europe  Slow and protracted improvement in activity continued in July, with activity likely to remain weak into H2 2020.

The pickup in EU27 output continued in June and by 4% m-o-m but is still -6% down y-o-y. The IHS Markit Eurozone Construction PMI continued edging towards neutral levels in July and to 48.9 from 48.3 in June (50=neutral levels).

Europe: Construction sector production (seasonal & calendar adjusted vs PMI (eurozone)
Source: Eurostat, IHS Markit, McKinsey & Company

India  India: Favourable monsoon supports agriculture but slowdown in infrastructure investment weighs down on construction.

The weighted average of eight core industries output continued to pickup in July from the lows seen in April 2020 but activity is still down -10% y-o-y. Barring fertilizer (where a normal monsoon is leading to a positive outlook for agriculture), coal, crude oil, natural gas, refinery products, steel, cement and electricity continued their decline on a y-o-y basis.

India: Weighted average of eight core industries industrial production
Source: INSDAG
Special topic: Steel promotion in construction and the need for global collaboration

Dr Joseph Seungmin La, Chairman, constructsteel

Construction has been the foundation of our economy & development as far back in history as we can go. It all started with the building of houses, shops, roads, bridges, harbours and castles to develop & maintain our civilization. Hence the origin of the term Civil Engineering (in contrast to Military Engineering). The term construction engineering originated as a result of the modern industrial revolution, which took place in the last 150 years. This long history which evolved together with the developing fabric of human life has made construction very segmented and diverse, not only as a market but also in its requirements. As a result, this makes it harder to approach it with just a ‘single’ overall marketing strategy.

For the steel industry, the construction industry is attractive owing to very significant volumes going there i.e. half of global steel consumption. However, concerning its quality aspect e.g. higher steel grades, additional performance distinctions etc., it is viewed as being less attractive vis a vis other industries such as automotive, electrical and others.

The above two characteristics of the construction industry resemble challenging starting points in the promotion of steel in construction. However, a subset of the detailed problems & limitations could actually be a starting point for the steel industry to begin thinking and acting:

Construction has not been the main focus of interest

For the past 25 years the automotive industry has been the steel industry’s main focus. Rapid developments & an evolving market has required the steel industry to divert significant resources towards this sector. Indeed, steel grades over 1 GPa in automotive have made their mark together with numerous steel grades for various fabrication needs. As a result, the focus on automotive has generally deterred efforts of the same magnitude in construction. The overall effect of this has been for competing materials to take market share.

Long term investment & return characteristics

Construction probably has the longest and slowest market & technical development cycle. In contrast to a mobile phone or a car, the former enters the market each year and the latter every 5-7 years. In construction, technologies are typically realized every 10-30 years. This long history which evolved together with the developing fabric of human life has made construction very segmented and diverse, not only as a market but also in its requirements. As a result, this makes it harder to approach it with just a ‘single’ overall marketing strategy.

"Engineering" language barriers

The steel industry typically converses in the language of materials e.g. strength. However, construction professionals typically converse in the language of structures e.g. stiffness. This small difference is the starting point where we often look and approach the market in a misleading way. It is usually not sufficient to solely develop and introduce new steel grades and request the construction market to adopt it. We need to think and talk in the appropriate ‘engineering’ language in order to better & properly approach the market.

Diverse & segmented market

Various marketing efforts which have approached the construction market with a single & straight-forward strategy have failed. The reason for this is that the construction market is very segmented, with various & different needs and players depending on each segment. It is necessary to break construction down to lower levels and establish a strategic approach to that specific market. For example, constructing a building or a bridge would require a whole different approach towards the value chain, technical requirements, government regulations, supply chains, key players etc.

Eco-system is absent

Are there many annual large conferences just for steel construction? Do EPCs have dedicated steel construction departments? Are there local companies doing business in the construction industry only with steel? The answer to all of these questions is simply NO. There are many lessons for us to learn if we compare this with concrete and timber. For the market to self-develop&upgrade, an eco system needs to be in place which can sustain itself. British Steel in the 1980s undertook this successfully in UK. Besides the UK, there are only a very few other examples to add but in general there have not been many success cases globally.

The above examples demonstrate why global collaboration is necessary. Below I provide a few examples as to how we can get the process started:

How can we define ‘collaboration’ and what aspects (i.e., research, development, marketing, etc.) are the most prominent? Which are the most challenging?

Global collaboration in steel construction does not imply that it should be constrained to worldsteel members. Indeed, it could be the starting point, but must progress to potential partners, i.e. product manufacturers & specialists, architects, engineers, constructors etc.

Global collaborative topics could be from all aspects of steel construction and starting from a very high level. Subsequently the details and regional issues can be tackled by the key players in that region for that region’s specific requirements. The topics and methods (research, development, marketing) would be decided on what the business case is for the targeted collaboration and which approach would be the best for that specific case.

The most challenging issue would take place if the joining party’s focus is on their own interest and does not foresee the importance and the influence that the results of the global higher-level activities could have on their market and business. When everything is done at the regional level with its own parties only, then most likely it will need more time, cost and efforts in reaching a successful result.

What are some landmark examples of collaboration across companies or sector associations?

Recent activities of the timber industry could be a good example for us to follow and benchmark. On a very high level, associations or professionals show and promote the extent to which recent innovations can have an effect in the market with one voice. They engage with governments, universities, engineers (concerning sustainability) and enhance their capabilities even further. These large and diverse eco-systems involve many small size companies and local professionals, collectively engaging to develop and promote their business. This allows self-evolution which cyclically increases their competitiveness. The number of participants in the timber construction business would probably out score the steel construction industry by 100 fold.

Dr Joseph Seungmin La, Chairman, constructsteel
What do you see as short and long-term aspirations when it comes to global collaboration?

Recent activities launched at constructsteel represents our vision of global collaboration. The Zero Energy Building working group is a good example. It is targeted at the residential building market segment in which steel has a small market share and thus minimizes conflict of interest with participating members. At the same time, recent awareness and government enforcement into Zero Energy is a good stage for steel to enhance our capabilities. We have started by developing a Best Practice Guide which brings together best practices from all our members. The program now is in a phase where we are working with acknowledged architects on developing an actual design that can be easily adapted to regional project requirements. In our later progress we will work together and assist in developing the business case for our members in their own markets.

Zero Energy Building is just the beginning: There are numerous items and topics that could be approached in a similar fashion. The steel industry needs to initiate these global initiatives to increase our share of the market. Items for global collaboration can range from market/project targeted steel developments, assistance in upgrading steel related standards & design codes, educating & promoting young engineers, developing manuals & guides to allow easy access for professionals, manufacturing topics such as prefabrication and modularization, enhance competitiveness in market segments such as bridges and road barriers and to cope with global sustainability issues. Prioritization of these items needs to be carried out with limited resources but will be the starting point of future discussions and gatherings by constructsteel members.

What are the necessary steps that stakeholders should take to reach those goals?

Joining the constructsteel program would be a good start. From there share your knowledge, learn from other's experience and expertise, discuss amongst members on how to enhance our competitiveness, participate in our new endeavors. Then we should collaborate with our potential partners on mutually agreed goals and targets. constructsteel can be the platform for these kinds of global collaborations.
Chapter 1

Chapter 7 discusses the assessment by code checking according to the elastic and plastic theory are also the assessment of the resistance of cross-sections and combined internal forces. The principles of the resistance of cross-sections, both for single under axial forces and the resistance of bolted and EN 1993-1-8. At a basic level, the assessment of the deformations. The UK government has confirmed a £900m funding boost for more than 300 “shovel-ready” projects in England in an effort to speed up construction of homes and infrastructure. As part of stimulus package aimed at boosting the economy in the wake of the coronavirus crisis, £360m will also be allocated towards delivering 26,000 new homes on brownfield sites. China State Railway Group would double the length of the nation’s high-speed-rail network to 70,000 km of high-speed tracks by 2035 which will help achieve President Xi Jinping’s vision for a modern socialist country. Australia: Plans underway to build new high-speed rail in the state of Victoria. Construction equipment sales in China are expected to increase 14% in the year 2020. The previous expectation was for sales to fall 8% due to the impact of Covid-19, but stimulus measures in the wake of the pandemic are now expected to reverse this trend. Vietnam construction industry grew 4.5% year-on-year during the first six months of 2020 – higher than the GDP growth rate of 1.8%. Despite the effect of COVID-19, domestic consumption of coated steel increased by 6.5%, while that of construction steel and steel pipe decreased by 8.1% and 6.8%, respectively. Did You Know?

Starbucks now offers an online construction course exploring the diversity and versatility of steel in its wide variety of shapes, properties and applications. Find out more.

To order this publication please visit the worldsteel.org bookshop.
The possibilities for using steel in buildings and infrastructure are limitless. Steel’s versatility is another of its key strengths.

Balfour Beatty predicted to return to pre-Covid figures by 2021 which would be broadly in line with 2019, if the chosen markets would recover as expected. Link.

US-based Jacobs Engineering reported their third quarter revenue up 2.9% from the same time period last year, while the backlog increased 5% year over year. The company noted that COVID-19 will continue to impact operations in the fourth quarter of 2020 and likely provide challenges into fiscal year 2021. Link.

US-based Tutor Perini announced second quarter 2020 earnings of double-digit, year-over-year revenue growth across all segments despite the COVID-19 pandemic with a 13% increase in revenue due to a 20% year-over-year increase in civil projects. Much of Tutor Perini’s work, which is in the infrastructure sector, has been deemed essential and allowed to move forward. Link.

Sweden-based general contractor Skanska Thursday reported a Q2 2020 operating profit down 69% from a year earlier. The company said it had a strong first quarter, but that the second quarter was “disrupted” by the pandemic, and that its construction projects in Europe and U.S. were impacted. Link.

LafargeHolcim, a global cement, concrete and aggregates company reported that in the first half of 2020 net sales dropped 18 percent. Regionally speaking Asia Pacific was hit the hardest whereas, China, North America, Europe recovered and delivered a remarkable performance. Link.

French-based concessions and construction company Vinci has announced that consolidated revenue in the first half of 2020 is down 15% relative to the first half of 2019 due to the impact of Covid-19. Activities in France have been impacted most. Link.

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