**Situation and context of the proposal**

We the **Bold consultancy services limited.** are supposing our client is **Dorman products inc**. who is one of the largest manufacturers of precision steel components in automotive sector based out of United states and has a revenue of approximately $1 billion.

Amidst the turmoil and disruptions in the global supply chain in all the industries, steel wire industry is not exception, the natural calamities as well as the major geopolitical shifts around the globe are causing firms in various industries to undergo research projects to gain business intelligence that will enable them to charter through these unpredictable global supply chain waters.

This is a similar project in which we are sending a proposal to the client stating the basic findings in the industry with the various ongoing trends along with the recommendations about how to move forward. **(Steel wire is the basic and the most crucial raw material for the Dorman products inc., hence they want insights from this industry)**

**Executive summary**

The US steel wire market touched **USD 6.58 billion in 2021**, with a **CAGR of 4.5%,** US produced approximately **5.58 million tons** of steel in wire in 2021. Albeit the industry had taken some falls from the pandemic and the Russia Ukraine conflict, still it is showing bright prospects in the coming years. The key factors of resurgence of demand in the industry are the removal of lockdowns and restrictions in manufacturing, infrastructure development in the developing nations as well European union and the resurgence in global automotive manufacturing industry as well. **The exports price of US made steel wire have gone up,** while the increasing imports show the inability of domestic supply to meet internal demand, hence a **bright opportunity for investing in domestic steel wire manufacturing,** which would not only generate additional revenue, but help integrate backwards.

The US automotive exports are now reaching the pre pandemic levels, thereby increasing the demand of steel wire. The availability and reducing costs of automation technology point towards adopting it as the labor shortage in the industry has sent up the price of labor as well.

**US imports almost 60% of its pig iron from Russia and Ukraine**, other crucial raw materials for making steel wire like coke coal are also imported from them, hence the Russia Ukraine conflict has adversely impacted the supply**, inventories need to be buffered instead of using the Just in time system as well as procurement and suppliers need to be diversified to bear through the increased costs of steel wire and avoid dependence.**

**The opportunities and solutions**

The steel wire demand in US as well as world is rising, the domestic supply in the United States is not able to meet the internal demand, hence there is an opportunity to invest in domestic manufacturing for the following reasons.

1. Increase in revenue stream, as the size of the US steel wire market is USD 6.58 billion, even capturing 0.5% of market share would lead to an increase of more than **USD 30 million in revenue.**
2. A steady supply of steel wire for the core components manufacturing business, this is essential as the supply chains are disrupted across the globe.

For capturing the increased demand there can be two methods:

1. Going for opening a steel wire manufacturing plant.
2. M&A projects, since covid has adversely affected many medium and even some large size firms, hence they are looking to merge or even be acquired to sustain.

The labor shortage in the industry has also rapidly caused an increase in labor prices this has left many firms with unutilized capacity, while many large ones are going for automation, which has become cheaper and easily accessible with the advancements in CNC and robotics technology, hence it is the right time to go for manufacturing process automation partially at least. This would also increase the manufacturing costs in long run and increase product quality as well

**CONTEXT**

US Steel Wire Market Size in 2021 was estimated at US$6.58 billion by reliable data source which is mentioned in the References, US Steel Wire Market growth rate for period 2020-2027 was estimated at 4.5% estimated, this is the compound annual growth rate or CAGR. US produced approximately 5.58 million tons of steel in wire in 2021.

**Export outlook of US steel wire market.**

The export outlook of the US steel wire market shows that the value of exports is higher than the pre pandemic level while the quantity is has just reached the pre pandemic level, hence the price of US made steel wire has gone up in the export markets.

**Import outlook.**

The import outlook shows that the prices of imports have gone up and so has the quantity indicating that the domestic steel wire supply in the United States is unable to cater to the demand.

**Overall outlook of demand in the US steel wire industry.**

The pandemic led to a sudden halt in manufacturing activity around the globe, the US steel wire manufacturing was no exception, and this led to a pile up and back log of orders in the industry, which lead to a sudden resurge in demand post the removal of pandemic restrictions and lock downs.

The **Automotive** sector which is one of the key demand drivers in the US steel wire industry, is showing healthy growth as the US automotive exports are also going up, hence sending up the demand in the industry.

The acute labor shortage in the industry has been there even before the pandemic and has only been exacerbated by it, the increasing number of aged employees is leading to retirements, while the young people do not wan to enter manual working jobs, hence causing a labor problem.

The automation technology is becoming increasingly accessible and less costly, hence many players in the industry are going for automating the manufacturing processes either partially or fully in order to deal with the labor shortage as well as to become strategically advanced manufacturers in the industry.

**Evaluation of various options.**

Given below are the pros and cons of various options and solutions for dealing with steel wire supply problems.

|  |  |  |
| --- | --- | --- |
| **Option** | **Pros** | **Cons** |
| Investing in new steel wire manufacturing facility | 1. Long term gain. 2. Steady supply of steel wire for core business | 1. High initial investment 2. Shift of focus from core business (temporarily) |
| Going for mergers and acquisitions with the existing players | 1. Less time consuming as compared to first option 2. Will be ready to manufacture steel wire much earlier as compared to first option | 1. Compatibility issue of organizations may arise 2. Complex legal procedures |

Given below are the pros and cons of adopting automation in manufacturing processes.

**Pros:**

1. Strategically important, as with the advent of industry 4.0, all manufacturing is set to be automated.
2. Will increase manufacturing efficiency and waste reduction.
3. Will increase product quality

**Cons:**

1. Will require re skilling of workers or hiring new ones.
2. Will require large number of initial investments.

**Cost and time estimation of options being considered:**

|  |  |  |
| --- | --- | --- |
| **Option** | **Cost** | **Time Estimation** |
| **Setting up a modern steel wire manufacturing plant** | $50-150 million | 1.5-2 years |
| **Going for M&A** | $10-40 million | 4-7 months, depending on the size and type of target firm. |

**Recommendations based on various estimations**

**To deal with steel wire supply problem we suggest Dorman Products to go for a Mergers and Acquisitions project (M&A)**

For this purpose firstly we need to decide on the target firm, t(he steps for which have been explained in the action stage).

**After selecting the target firm and confirming which of them is ready to go for M&A.**

1. Contact them via your legal department.
2. Go for a due diligence of their background check.
3. Study their culture, operations, finances, history etc. to check for compatibility with your company.
4. Make a legal contract and agreement for M&A.
5. Finally execute M&A.

**Actions**

The following steps explain how to go for the brown field or M&A project.

1. Make an Exhaustive list of all the target firms for the M&A project.
2. Make the profile of target firms by collecting information on selected important parameters.
3. Evaluate the target firms by rating them on selected parameters.
4. Come out with a final rating score of the target firms.
5. Choose from the top-rated firm to go for M&A.

**The following RACI matrix shows how go for M&A**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Person**  **Action** | **Research Analyst** | **Research Manager** | **Legal Analyst** | **Legal head** | **CEO** | **CFO** |
| **Target Research** | R | A | C | C |  |  |
| **Target Evaluation** | R | A | C | C |  |  |
| **Due diligence on background check** |  | I | R | A |  |  |
| **M&A contract agreement formation** |  |  | I | R/A | C/I | C/I |
| **M&A Execution** | I | I | I | R/A | A/R | I |

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**SWOT** analysis of the client.

Strengths

1. Large market capitalization and one of the biggest player in the industry.
2. Multiple manufacturing facilities available throughout the US.

Weaknesses

1. Slow manufacturing process.
2. Vulnerable to supply chain disruptions.

Opportunities

1. The increasing demand of steel wire in the US and the world.
2. Enhancing manufacturing with automation becoming cheaper.

Threats

1. Many players in the industry are merging for strategic advantage and giving tough competition to other competitors.
2. Disrupted supply of crucial raw materials for steel wire manufacturing.

**PESTLE analysis of the US steel wire industry.**

The factors have been taken in context of the domestic steel wire manufacturing in the US

**Political factors affecting the industry:**

**Positives:**

1. A shift towards revitalizing the manufacturing industry in the US.
2. High import duties on steel and steel mill products are promoting domestic consumption.

**Negatives:**

1. Increasing regulation on compliance to GHG emission standards is hampering production growth.

**Economic factors affecting the industry:**

1. High inflation in the US as well as global markets
2. High probability of recession in the US
3. Slow GDP growth in US will hamper the growth of the economy

**Social factors:**

1. Investors becoming conscious of ESG factors while investing in firms

**Technological factors:**

1. Increasing adoption of automation technology in manufacturing.

**Environmental factors:**

1. Increasing global warming calls for tighter emission restrictions.

**Legal factors:**

1. New tariff agreement laws with UK for steel and steel agreements will promote imports.
2. An appeal to house of representatives by American iron and steel institute to **amend the America Competes Act**, to tackle trade challenges presented by China’s cross border subsidization.

**Key assumptions in the study.**

1. One of the key assumptions while conducting the study is that US economy might go into a recession, this has been backed up by Bloomberg research, but still, we cannot be a hundred percent sure.
2. The steel wire industry is directly impacted by the US steel manufacturing industry. We had to assume as steel wire is a very niche market and hence it is difficult to find stats directly relating to it, hence we take relevant and analogous proxies from US steel wire industry.
3. The manufacturing in US and more over most countries of the world has taken up after the pandemic, we need to assume this, as Covid is still spreading in countries like China, which might be hampering production locally, but in US it is resumed.
4. One of the assumptions is that in conducting the PESTLE analysis, we had to consider major factors from the steel industry in the US as steel wire is a very niche market and factors directly impacting this industry could not be sequestered, but since steel wire is directly impacted by steel industry, we assumed the relevance of PESTLE factors would be same for both the industries.
5. In the RACI analysis of actions, since we cannot go into to much detail as not permitted by the scope of the project, we have assumed in some cases that a single person may be accountable as well as responsible for a task.

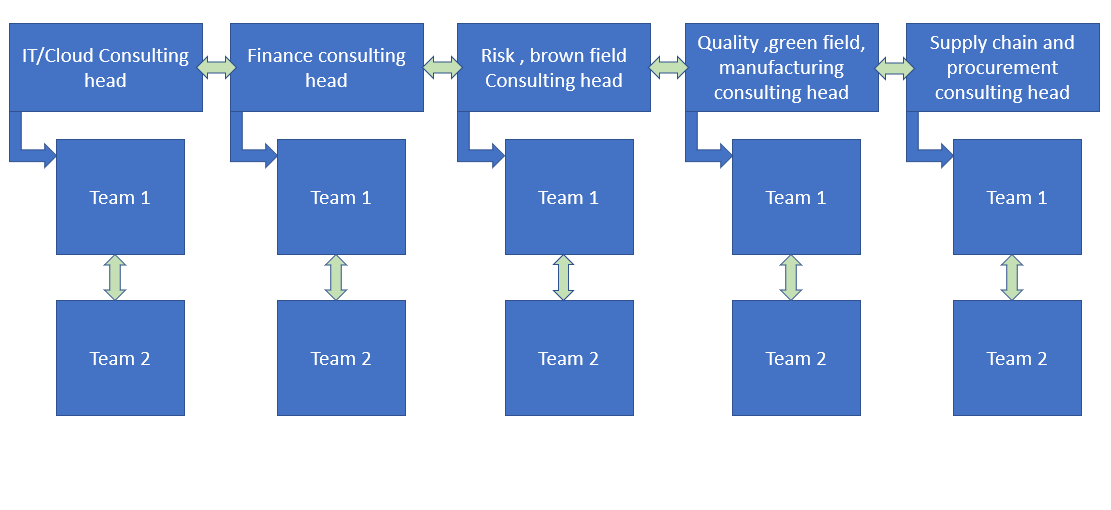
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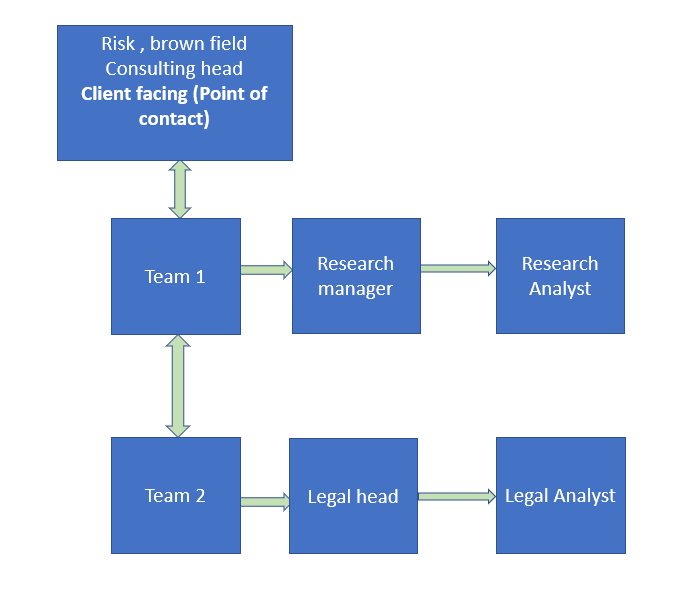
* As we recommend Dorman Products for M&A by doing so, they would be able to capture 1% of market share. Hence their revenue would increase by USD 60 Million.
* By acquiring a raw material firm, they will be able to reduce their operating cost as their major chunk of funds goes away in collecting raw materials for the finished goods.
* We the Bold Consultancy Pvt. Ltd are charging a fee of 2% on the revenue addition by the firm through M&A.

**Key Risks**

1. Setting up a new steel wire manufacturing facility would incur high capital expenditure in start and making it profitable might take longer than expected.
2. Current labor might be reluctant in training for working with automation technology.
3. The cost of hiring trained labor for working with automation technology might get higher than the anticipated returns from adopting automation.
4. Compatibility issues might lead to unsuccessful mergers.

**Organizational chart**

**How the organization structure will imply to this project**



**Legal / Regulatory / other specialist opinions:**

**ESG related legal and regulatory requirements for commercial manufacturers.**

1. **ESG reporting regulations** to become stringent in the USA in coming year or two. Albeit currently USA does not have laws or legal requirements for reporting ESG at the Federal level as of now, (which is unlike Europe), yet the **SEC (Securities and Exchange Commission)** in the March of 2021, announced creation of a climate and ESG task force to enforce adherence to regulations related to climate risks.
2. **The Financial stability oversight council (FSOC),** which is comprised of heads of various federal agencies like the Treasury, SEC, the Federal reserve board, and the Office of Comptroller of the Currency (OCC), recently issued a report on climate related financial risk, among other things also calls for new disclosures in financial statements, the report endorses building on the core concepts of the **(TCFD), Task force on Climate related Financial Risks.**

**Opinion**

**5 Important points to consider post-M&A projects.**

1. Distinguish between ongoing resource needs versus one-time, deal-specific expertise.
2. Take advantage of windows of opportunity when teams are primed for change.
3. Ensure smooth integration of people, departments, and cultures.
4. Learn to identify and deploy the right resources to streamline processes.
5. Build a unified culture that’s focused on the future.

**Market Analysis**

**The Global Steel wire Market outlook**

The global steel wire market size in terms of US dollars was 91.33 billion US dollars in 2018, it has been forecasted to grow at a CAGR or a compounded annual growth rate of 2.7% till 2026, hence by calculation, in 2021 the global steel wire market was worth approximately 99 billion US dollars and in 2022 it is expected to reach a value of 101.6 billion US dollars, hence we can see that the market is no small market and is significant in size.

**Import and Export Scenario of global steel wire market:**

The total value by weight (in tonnes) of imports and exports of steel wire in the world was 636430.417 tonnes in 2021, now let us understand the meaning of this value, this value means that in total the sum of the volume of imported steel wire by all the steel wire importing countries in the world and the sum of the volume of all the exports by all the steel wire exporting nations in the world is equal to 636430.417 tonnes in 2021, now the breakup is shown in the doughnut chart given below.

The above chart shows the percentage breakup of the total imports and exports of steel wire in the world in 2021, 48% exports means that 307286.68 tonnes of steel wire was exported by all the steel wire exporting countries in the world, while 52% import means that 329143.74 tonnes of steel wire was imported by all the steel wire importing countries in the world in 2021. It must not be assumed that this value of total of exports and imports of steel wire globally in 2021 is equivalent to the total production of steel wire in the world globally in 2021, no this value only pertains to the value in tonnes of imported and exported steel wire, for instance it is possible that a country produced 200 tonnes of steel wire, out of which it exported 80 tonnes and it is possible that the same country might have imported some steel wire in the same year, so we can observe that the value of 120 tonnes which was produced by the country and utilized internally is not included in import export values and hence the above figure does not indicate the total production of steel wire in the world whatsoever.

**Key Drivers of demand in the global steel wire industry:**

Every industry has many demand drivers, but some of them are such that together they make up a significant portion of the demand in that industry. These drivers could be of different natures in terms of their anachronistic existence, meaning they can be permanent or long-term drivers, short-term drivers, seasonal drivers, or even momentary drivers. Long-term drivers are those that drive demand in the industry over long periods of time. Now here's an obvious question, how long, and the answer is that this varies from industry to industry, in some industries that are as fast moving as the fast moving consumer goods industry (FMCG) is a driver or trend that demand can increase for a year or even less and can be viewed as a long-term driver as the nature of the industry is such that it changes rapidly, similarly in some industries long-term drivers can be those that increase demand for the next 10 years Years determine then there may be short term drivers that cause an increase in demand in shorter periods of time, seasonal drivers are easy to understand, they cause demand to increase seasonally such as summer or warm weather is a seasonal demand driver for the ice cream manufacturing industry while cold weather is a demand driver for wool or wool garment manufacturers. Momentary drivers are those that cause an immediate increase in demand and then subside, for example we can see many momentary demand drivers in the stocks of various companies and mainly in IPOs of various large companies, the stock value and therefore the demand of it can be temporary even for a single one increase day or hour and then immediately decrease again the next day. Therefore, it is now clear what types of drivers we will be discussing for the global steel wire industry

1. **Revival of demand in the automotive industry** around the world after the Corona Virus Pandemic – 2019: Needless to say, the automotive sector was one of the hardest hit by the production and spending restrictions caused by Covid-19 in 2020 As many countries faced the first, and for some of the worst, waves of the pandemic, the number of cars manufactured worldwide fell by 16% compared to 2019, impacting demand for both steel wire and other metal wires in large numbers Scope used in automotive manufacturing, e.g. B. in shock absorbing springs, for the car chassis and more. The industry is now recovering and on the up, hence there is a revival in demand in the industry heralding a revival in demand for steel wire worldwide and this demand driver can be considered as a medium-term driver after some time the demand in the industry would stabilize.
2. **European infrastructure development spen**ding: Infrastructure development in various nations that are part of the European Union has picked up pace after the pandemic, most of the nations in the European Union are highly developed and hence are now focusing on making their cities ultra-modern, modular and to make intelligent, which requires the reconstruction of infrastructure, the construction industry is a long-term driver of demand in the global steel wire industry, as steel wire is used for many applications in infrastructure development, such as: B. Steel wire lattice frames for making various columns and other surfaces, while other metal wires are also used in the construction industry, such as electrical wiring in buildings using copper alloy metal wires.
3. **Infrastructure Development in Developing Countri**es - In developing countries such as India, China, Brazil, infrastructure development such as modern high-rise buildings for office and residential use, roads and railways, etc. is now gaining momentum, all the more so after the recovery from the pandemic has picked up momentum. The governments as well as the private sector in these economies are looking forward to investing heavily in infrastructure development as even many multinational companies are willing to set up factories and manufacturing infrastructure in developing countries due to the high population and low labor costs drive the global steel wire industry in the long term.

It should be noted that the demand drivers discussed above are not the only ones driving demand in the global steel wire industry, but they are the main ones. Other demand drivers in the industry are not as significant and have therefore not been discussed in this report.

Having discussed the major demand drivers in the global Steel Wire industry, let us now discuss the major industry players on a global scale. We will discuss the major players along with a brief description of these companies.

**Key players in the global steel wire industry:**

1. **Arcelor Mittal (The Luxemburg)** – Perhaps there is no need to introduce the Mittal steel group as chairman, Mr Laxmi Mittal, who is still one of the richest people in the world and was the richest person in India a few decades ago, Arcelor Mittal is the second largest steel manufacturing companies in the world and therefore it is not surprising that it is one of the largest producers of steel wire in the world, with a presence in 18 countries and buyers all over the world.
2. **Nippon Steel (Japan)** – Nippon Steel is the third largest steel producer in the world and was formed in 2012 through the merger of old Japanese steelmaker Nippon Steel and Sumitomo Metal.
3. **JFE Steel Corporation (Japan)** – JFE Steel is Japan's second largest steel producer and also one of the world's largest steel wire producers. Formed by the merger of Kawasaki Steel and NKK (Nihon Konan) in 2002, JFE Steel is owned by JFE Holdings, which is listed on the Tokyo Stock Exchange.
4. **Bekaert SA (Belgium)** – Headquarters in Belgium, employs 28,000 people worldwide, its main business is steel wire forming and coating. Bekaert operates in 45 countries and had sales of more than $5 billion in 2019.
5. **Tata Steel Limited (India)** - Tata Steel is another company that perhaps needs no introduction, one of the oldest and largest steel companies in the world, Tata Steel is also India's one of the largest producers of steel wire and supplies the same worldwide.
6. **HBIS Group Companies** – HBIS Group of companies belongs to Serbia with its headquarters in Belgrade and is one of the largest producers of crude steel and steel wire in the world.

The global players discussed above are by no means the only ones but the most important ones, there are other global players in the world steel wire manufacturing but these have been discussed here as they are the crucial companies selection criteria for various reasons which are not discussed in detail in this report but to provide an overview of the selection criteria used to select these key players, such as the extent of their presence around the world, their revenues, their steel wire production volume, etc.

Some basic yet important points related to the global Steel Wire Market have been discussed below**.**

1. **The largest share by volume and value in the global steel wire market was for carbon steel wire-** Steel wire is made of alloy steels which can have varying compositions, but the single most used steel is the carbon steel. The carbon steel wire has multiple applications such as tires, hoses, cords, staples, conductor armouring etc.
2. **Global steel wire supply chains are disrupted**: Due to the natural disaster of the pandemic and the geopolitical changes caused by the Ukraine-Russia war, the supply chains of steel, the main raw material for steel wire, are severely affected, as well as steel wire itself has experienced major disruptions, and both steel wire manufacturers and consumers too need to strengthen their supply chains to weather these difficult times. These disruptions, their causes and effects have been discussed in greater depth and detail later in this report
3. **One of the major restraints on the growth of steel wire market across the world is the increasing use of wires made from other materials**. Wires made from new super alloys in the industry such as Elgiloy and similar materials are being used because of their desirable properties such as: B. the ability to withstand extreme pressures and temperatures, also wires made of non-metallic wire materials such as plastics or other hybrid materials.
4. **Another constraint for the steel wire market worldwide is the rising raw material costs as well as the manufacturing process** – raw materials like pig iron, coking coal, etc. are becoming more expensive due to the Russia-Ukraine conflict and the increasing use of automation is driving up the manufacturing costs

**Data Analysis and Insights.**

**United States Steel Wire Market Value and Volume.**

Having briefly talked about the scenario or prospect of the global steel wire market, now we will turn to the United States steel wire market as the customer's own clientele are mainly from USA and then North America and we will be in this at the request of the customer Report covers the United States steel wire market and even some forecasts.

US Steel Wire Market Size in 2021 was estimated at US$6.58 billion by reliable data source which is mentioned in the References, US Steel Wire Market growth rate for period 2020-2027 was estimated at 4.5% estimated, this is the compound annual growth rate or CAGR. It must be explained here that these projections are subject to change as the world is undergoing major geopolitical shifts and changes at an unprecedented rate, causing disruption to all forms of manufacturing activity and supply chains around the globe, the United States steel wire industry is no exception .

Now we will go through the process of calculating the volume in millions of tons of steel wire production in the United States in 2021. As discussed earlier in the report, particularly in the part explaining the approach to market analysis of specific products and commodities, there are scenarios where data is not readily available even in private/paid databases as discussed in such scenarios, the researcher or the analysts resort either to estimates or estimates based on the availability of the data of the indicators that are close proxy or raw materials for the specific commodity or product under study, here we can say that the calculation of the volume of the in steel wire produced in the United States in 2021 can be considered an estimate and not an estimate since we had access to the exact average steel wire prices in the United States were known from the relevant source. However, this source cannot be mentioned in the references as it is a private and paid resource of The Smart Cube.

The low and the highest price of steel wire in United States in 2021 were US$1150 and US$1210 per ton respectively, then an average price is taken out from these two values ​​which is US$1180 as this price is assumed became the average price of steel wire per tonne in the United States for all of 2021. Then a simple mathematical division calculation gives the value of the amount of wire produced in the United States in 2021, the value of steel wire produced in the United States in the Year 2021 was 6.58 billion US dollars, the average price of steel wire per ton in the United States in 2021 was assumed to be 1180, now the average price of steel wire per ton is multiplied by the amount of steel wire in ton, received by the United States is equal to the total value of steel wire produced in US dollars in 2021 lar, therefore 6.58 divided by 1180 should give us the volume of steel wire produced in the United States in 2021 of America in billion tons. $6.58 billion when divided by $1180 per tonne equals 0.0055762711 billion tons of steel wire, this value is in billions which is 10^3 in millions. So if we multiply 0.0055762711 by 1000, we get the value of steel wire produced in the United States in 2021 in millions of tons, which equals 5.5762711 million tons, which we consider to be approximately 5.6 million tons of steel wire that were produced in the United States in 2021.

At last we now know the value and volume of steel wire produced in the United States for 2021, the United States produced steel wire worth US$6.58 billion with a volume of 5.6 million tons, these figures are important for the customer to make decisions such as investments in capacity expansions, etc.

Now tell us the total volume of crude steel production in the US in 2021 so we can get an idea of ​​what percentage of steel produced in the US is used to make steel wire. For this data, the source can be credited as it is a publicly available and freely available source as well as one of the main credible data sources in terms of steel making data around the world, the source is the World Steel Association report, the link to the World Steel Association website was mentioned in the references, this report states that in 2020 the United States produced approximately 72.7 million tons worth of crude steel, this figure increased by 18.3%, increasing to 86 million tons Steel products in 2021, from this we can make simple calculations. If we divide the value of steel wire produced in the United States in 2021, which is approximately 5.6 million tons, by the total crude steel produced by the United States in 2021, which is 86 million tons, we get 0.06511, which is multiplied by 100 gives us a value of approximately 6.5%, so we can say that in 2021 the United States produced steel wire worth almost 6.5% of its total crude steel production.

Now we know the value and volume of the steel wire market in the United States, while we also know the volume of steel wire produced as a percentage of the total crude steel produced by the United States in 2021. To talk about the United States as a steel producer on a global scale, then the United States is the fourth largest steel producer in the world, they produced 86 million tons of steel in 2021, China is the top crude steel producer in the world, followed by Europe Union, but if you Considering it as a single country, then India is the second largest single steel producer in the world, India will produce 118.2 million tons of steel in the world in 2021, while in third place comes Japan, which produced 96.3 million tons of steel in the world in 2021, and as already mentioned, in fourth place comes the United States, which will produce 86 million tons of steel in 2021, and in fifth place is Russia, which produced 75.6 million tons of steel in 2021. So, that was a brief overview of the amount of steel produced by the top five steel producing economies in the world in 2021.

It is important to note that China is both the largest single producer and consumer of steel in the world. China produced around 57% of all steel produced worldwide in 2020 and is therefore very important for global steel and therefore global steel wire supply chains as many nations as consumers of steel are dependent on the Chinese market to sell their steel or steel products this information is critical for the customer to know which are the world's leading steel producing and steel consuming economies as the customer may need to make important decisions regarding selling in international or global markets or expanding their presence in other steel producing eco-systems.

**The United States steel wire Export outlook.**

The graph above shows the trend in the amount of export values ​​from the United States to the world for the period 2017-2021 in thousands of tons. In this time span, we can observe that for the pre-pandemic period, which is before the end of 2019 or before 2020, the value of exports is higher and decreases significantly in 2020 as the United States faces the worst of the pandemic despite exporting were started to recover in 2021 and is higher than 2020, but it is evident that it has not yet reached pre-pandemic levels. According to experts, it will take between 2 and 3 years, i.e. 2023-2024, before the export volume could reach and further exceed the pre-pandemic level. If we want the absolute values, then they are given in the table below.

|  |  |  |
| --- | --- | --- |
| **Year** | **Quantity in 1000 tonnes** | **Percentage change from previous year** |
| **2017** | **14095** | **-** |
| **2018** | **13049** | **-7.42%** |
| **2019** | **10743** | **-17.67%** |
| **2020** | **8668** | **-19.31%** |
| **2021** | **10619** | **22.50%** |

The chart above shows the value of Steel Wire exports (in million US$) from United States for the period 2017-2021, as expected the value chart follows the same trend or pattern as the volume chart, although most of us might think that both charts for exports, volume and value, have to follow the same trend, but it doesn't have to be like this every time, there are other cases, e.g. B. when the export quantity might increase but the export value might decrease or remain constant due to decrease in the export value of that commodity, another reason could be that the export quantity might decrease but the value decrease due to the high increase in the export value of the commodity. This shows that for the given period the export value for the US steel wire was proportional to the quantity, the table below shows the absolute export values.

|  |  |  |
| --- | --- | --- |
| **Year** | **Value in Million USD** | **Percentage change from previous year** |
| **2017** | **143** | **-** |
| **2018** | **149** | **4.2%** |
| **2019** | **135** | **-9.4%** |
| **2020** | **120** | **-11.12%** |
| **2021** | **150** | **25%** |

**The United States steel wire Import outlook**

The above graph shows the trend of steel wire import volume in tons for the United States, the general trend follows that of steel wire export volume, but the recovery and rise of imports to pre-pandemic levels is much faster than that of the export volume recovery rate at post-pandemic level, we can also see this from the percentage change in import volume in 2021 compared to 2020. It is also important to note here that the United States is a net importer of steel wire and does not export as much steel wire as it imports, so we can also say that the United States is not yet self-sufficient in meeting its steel wire needs and therefore relies on imports are dependent. The table below shows the absolute values ​​of steel wire imports in tons by the United States for the period 2017 to 2021.

|  |  |  |
| --- | --- | --- |
| **Year** | **Quantity in tonnes** | **Percentage change from previous year** |
| **2017** | **53061** | **-** |
| **2018** | **51424** | **-3.08%** |
| **2019** | **42421** | **-17.50%** |
| **2020** | **33717** | **-25.81** |
| **2021** | **46213** | **37.06%** |

As stated before, in the above table we can observe that in the post the worst pandemic period that is in 2021 for the United Sates, the recovery in the quantity of imported steel wire is being seen as 37.06%, this value is more than that of increase in export value for 2021.The above graph shows the absolute value in the United States dollars of the steel wire imported by the United States for the period of 2017 to 2021, we can observe the general trend to follow that of the value of exports and again we observe that the recovery of import value of steel wire is faster than that of the recovery of the export value of steel wire, this is again due to the fact that the United States is a net importer of steel rather than an exporter. The table below shows the absolute value (Million US dollars) of imported wire for the United States in the period of 2017 and 2021.

|  |  |  |
| --- | --- | --- |
| **Year** | **Value (Million Dollars)** | **Percentage change from previous year** |
| **2017** | **234** | **-** |
| **2018** | **231** | **-1.28%** |
| **2019** | **199** | **-13.8%** |
| **2020** | **152** | **-30.9%** |
| **2021** | **222** | **46.05%** |

The table above shows the absolute value of steel wire imports by the United States in millions of dollars for the period 2017 to 2021, as we can observe that the value for the percentage increase in steel wire import value for the United States is 46.05 percent, this value is higher than the export value in millions of dollars of steel wire for the United States, which is 25 percent, so again we can see that the United States is a net importer of steel wire.

Now we need to look at the main ingredients or raw materials that go into the manufacture of steel wire. In this context, we will discuss each component in detail and also look at some data from the relevant databases on these components. To give us an idea of ​​their prices, for this purpose we will consider the producer price index of the different raw materials used for steel production because steel itself is the basic raw material for steel wire drawing, we will also take into account the producer price index of steel wire drawing. Please note that the data for these indices was taken from the US Bureau of Labor Statistics, which makes data freely available in the public domain. The data were recorded in an Excel spreadsheet.

**Producer Price Index:**

Most of us have heard of Consumer Price Index or CPI which is a commonly used economic indicator used to measure inflation for general consumers in an economy, but there is also Producer Price Index, PPI is laconic used to measure We can say, that the producer price index is an indicator to capture the change in the prices that the producer receives for the sale of his goods and services. There is a notion in both general science and the general public that PPI and CPI generally follow the same pattern, but there are cases where their motion differs, and so we'll understand the fundamental difference between the two need to note that our customer is from the United States and so of course we consider the PPI of the raw materials for steel wire only for the United States, we would look at the in-depth definition of the PPI for the United States ourselves to convert it from the United States distinguish CPI . PPI in the United States has considered a very wide range of items, it includes not only the price of goods and services sold by manufacturers to consumers, but also the goods and services that manufacturers consider their own Consuming raw materials for their manufacture or maintenance operations, even investments, another difference between the CPI and PPI is that the CPI includes imports into the United States while the PPI does not.

Now that we understand the PPI, we will now understand each commodity and its PPI trends from 2020 to March 2022. It must be noted that steel wire is made from steel and no raw materials are used other than those used in the manufacturing process, let's look at the raw materials used in steel making.

1. **Iron Ore** – The very first raw material for steelmaking is Iron Ore, it is a naturally occurring mineral in the form of rock from which we extract the metallic element with the symbol Fe, Iron Ore is the most basic form of pig iron which is smelted into pig iron in the blast furnace, Pig iron is the basic input raw material for steelmaking, we need to note that the EPI for iron ore and pig iron were not reported separately by the Bureau of Labor Statistics as summarized under the name of iron ore itself, so we only used that metric.
2. **Coking Coal PPI** – The second raw material for steel making is coking coal as we discussed above that the raw iron ore is first processed into pig iron by smelting it in a blast furnace, now the coking coal is the fuel used to smelt the iron ore into the pig iron in the blast furnace, coking coal itself is made through a process called destructive distillation, in which the coal is heated in the absence of air, after this process we get the hard porous material called coke, this coke is then mixed with iron ore and limestone to make molten iron, from which we can continue to produce steel.
3. **Steel Scrap** - Steel making has been around in the world for thousands of years so now a lot of steel scrap has accumulated, this steel scrap can and is used to make new steel by melting it and then mixing it with the right ingredients needed to make it to get new steel. These are the basic raw materials that go into steel manufacturing but there are some other things that we need to consider and also look at with their PPI as we understand the manufacture and trading of steel wire and not just crude steel hence are below the other important factors whose PPI we have looked at and discussed.
4. **Fuel** – Fuel in the form of crude oil is an essential factor for almost all manufactured products and even more so for steel wire, even if the product does not use crude oil or any other fuel made directly from crude oil in its manufacturing process, even then there will always be fuel in the one or any other form used in the transportation of the product or in powering the manufacturing process of the product. Because of this, we need to consider the PPI for fuel.
5. **Dollar Index** – Another important factor to consider is the Dollar Index, which may not be directly related to steel wire, but if we consider the import or export of steel wire or any of the commodities discussed so far, the value of the dollar in the market has a significant for all Impact on the PPI.
6. **Steel Wire Drawing** – Next we can look at the PPI for the steel wire drawing process, this is important as this index captures the price movement of the steel wire core making process in the United States.
7. **Steel Wire** – Last but not least, let's look at the PPI for Steel Wire itself, this index gives us an idea of ​​the price movement of Steel Wire in the United States.
8. **Manufacturing PPI** – This factor may not be that important, but it was still considered for a full and comprehensive study. This indicator gives an idea of ​​the general price movement of all manufacturing activities in the United States.

**Outlook of demand in the United States Steel wire Industry.**

There is no need to introduce the Covid-19 pandemic, it can easily be described as the kind of catastrophe that humanity will face in a century, it has disrupted all dimensions of human life and the functioning of the economy in indescribable ways affected although its full impact is not known, but we do know that at least most economies around the world have had to shut down manufacturing processes for a few months to control the spread of the disease, causing a lot of disruption to the supply chain, we will now consider the To discuss the prospects for demand in the steel wire industry in the United States and how it has evolved, and a brief discussion of how it is likely to evolve in the near term.

When the world went into lockdown due to the pandemic, the steel wire and spring manufacturing industry in the United States also had to halt operations and manufacturing activities, the lockdowns led to the creation of backlogs and a build-up of orders, resulting in pent-up demand in the industry. It was natural for something like this to happen because the manufacturing plant and the economy of which it is an integral part are the kind of vehicles that move with a lot of momentum and cannot be stopped in an instant when they are going to be running then just like inertia stopped analogously in physics, some components of the vehicle stop immediately, but some components possess the potential to move in the same direction until their momentum comes to a halt, just like when a vehicle is stopped immediately then the people in it are jerked forward, there are seat belts for that, but enough of physics, the point is that in the case of austerity, when Covid-19 led to an immediate halt in production activities, the supply component immediately came to a complete halt, but the demand component had a certain inertia and did not stop immediately.

This means that the demand for steel wire also had a dynamic that led to an accumulation of demand even when the supply side was completely stalled, which also led to a backlog of many orders as there was no way during lockdowns to get the product to deliver to the customers. But when the demand ground to a halt, we observe during the phase of the pandemic that it declined because there was no supply, hence the industries consuming steel wire as a basic material had to halt production both due to the lockdown restrictions and B. due to the lack of raw materials.

As previously mentioned, after the lifting of restrictions in the US in early 2021, there was a sudden rebound or revival in demand. After the easing of lockdowns and the containment of the pandemic, the pent-up demand led to a sudden rebound in demand for steel wire, hence demand in the industry is expected to increase, while the data for the producer price index and import price index for steel and steel products shows that the Production and import costs of steel wire are increasing, the PPI for steel wire drawing in the US also shows a constant increase, which in turn shows the increasing production costs, the import volume is increasing, as we have seen the data in the graph on the previous slide. This shows that demand is increasing and will continue to increase for some time. Therefore, an increasing demand for steel wire in the United States can be expected for the time being.

**Outlook of Supply of Steel Wire in the United States**

It must be noted that while some waves of adverse impacts from the Covid-19 pandemic are still affecting the industry, there is now another major geopolitical event that is causing many supply chain disruptions, particularly in terms of impacts on the Steel and with it the steel wire industry in the USA and worldwide. Below we have discussed the statistics as well as the impact of the Russia-Ukraine War on the supply of steel and steel wire in the United States.

For the supply prospects in detail, in addition to looking directly at the supply of pig iron, we must also look at the supply of raw materials such as pig iron, steel and then the supply of the steel wire itself. The pie chart above shows the breakdown of US imports of pig iron, the main raw material for steelmaking, in 2021.

Steel wire supplies could face shortages and disruptions in the short term due to the crisis in Russia and Ukraine, data from the US Bureau of Labor Statistics shows for pig iron imports by the US from the world, Russia and Ukraine The US imported in 2021 approximately 6 million tons of pig iron from the world.

Of all the steel imported by the US in 2021, about 2 million tons came from Russia and 1.68 million tons from Ukraine, meaning that for Russia and Ukraine combined, the US gets about 60 percent of its pig iron imports from Russia and Ukraine imported.

The war has negatively impacted supplies for both nations, as US sanctions imposed on Russia, as well as Russia's own restrictions on exports of key commodities to the US, will both result in a drop in US pig iron supplies as supplies suffice Ukraine have been down due to the blockage of black sea, as well as the damage to the plants and factories done by the Russian attacks. Pig iron is the basic raw material for steel manufacturing, which in turn is the basic material for steel wire manufacturing, hence it might have an adverse impact on the supply of steel wires in the US.

The above graph shows the percentage change in the production of the steel wire in the United States from year 2018 to 2021, the absolute numbers for which has been given in the table below.

|  |  |
| --- | --- |
| **Year** | **Percentage change in steel wire production from previous year** |
| **2018** | **5.70%** |
| **2019** | **1.84%** |
| **2020** | **-18.04%** |
| **2021** | **26.68%** |

The supply shortage of pig iron in the US will certainly negatively affect the supply of steel wire in the US market.

Prices are expected to rise as there will be a rebound in demand and a sudden increase due to the resurgence of the unmet demand due to the pandemic and the limited supply will push up the prices.

Total steel wire production in the United States is expected to increase by an insignificant percentage in 2022 compared to 2021. This forecast was prepared by the World Steel Association, which regularly publishes reports on steel production as well as steel products in the various steel producing economies around the globe, short-term forecasts are also available in their reports, some of which are open access and some which are not open, the forecasts, as given by the association itself, are subject to great uncertainty because the situation of the Russia-Ukraine war is not yet clear.

**Trends in the United States Steel wire and spring manufacturing industry.**

**Shortage of Labour in the Industry.**

US steel product manufacturing employment data, taken from the Bureau of Labour Statistics, shows the decline in the absolute number of people employed in the industry. The first graph shows the age group employment in the industry for the period 2019-21, while the second graph shows the total employment in the industry for the same period.

The shortage is partly due to layoffs in sales and profits caused by the pandemic, partly because there are older people in the industry who are now retiring, while the younger generation does not want to do the manual work in noisy factories.

The above graph shows the age wise distribution of labor in the steel wire and spring manufacturing industry in the United States, we are looking at the data for the steel wire manufacturing industry from bureau of labor statistics of the United States. The absolute numbers have been given below. The numbers are in thousands

|  |  |  |  |
| --- | --- | --- | --- |
| **Age group (years)** | **2019** | **2020** | **2021** |
| **16 – 19** | **4** | **2** | **0** |
| **20 – 24** | **14** | **19** | **19** |
| **25 – 34** | **65** | **53** | **51** |
| **35 – 44** | **49** | **55** | **51** |
| **45 – 54** | **67** | **51** | **41** |
| **55 – 64**  **65 and above** | **68**  **16** | **65**  **11** | **53**  **10** |

In the above table we can observe that in the age group of 20 to 24 years the employment numbers have remained constant for the pre and post pandemic years, but all the above age groups and hence the total employment or the overall employment numbers have gone down in the industry, which has been shown in the graph below.

|  |  |
| --- | --- |
| **Year** | **Total number of employees (Thousands)** |
| **2019** | **283** |
| **2020** | **256** |
| **2021** | **225** |

It is apparent from the above graph as well as obvious from the data of absolute numbers in the above table that the total employment in the steel wire manufacturing industry has gone down, if we calculate the percentage change then since it was 283000 in 2019 and went down to 225000 in 2021, it has decreased by 20.49 or approximately 20.5% which is a significant reduction. There are many reasons for this labor shortage, the most common and the obvious one that has been observed in not only steel wire but many other industries as well around the globe is the pandemic, which lead to a halt in manufacturing and hence of loss of jobs in manufacturing industry, but the pandemic caused restrictions are not the only reasons, there are other less observed and much less discussed reasons like due to the rise in education levels many youth do not want to enter manual manufacturing jobs.

**Increasing use and adoption of automation in steel wire manufacturing.**

As discussed above that there is a shortage of labor in the steel wire manufacturing industry, this trend is one of the reasons, but by all means not the only one for the increasing adoption of automation in this industry.

Another reason is that the shortage of labor has also lead to an increase in the labor cost and with the cheapening of automation technology and equipment, the firms have calculated that on an aggregate adopting automation is going to be much more profitable in the short as well as the long term.

As the shortage of labor rises along with less availability of skilled workers, it leads to under production and unutilized capacity, therefore the manufacturers are moving towards automation in order to overcome the labor shortage as well increase the efficiency and cost effectiveness of their manufacturing process.

With advancement in technology, the prices of automation have come down.

We can observe the increasing labor prices, we can refer to ECI (Employee cost indices) for private industry workers in production.

As a proxy for increasing adoption of automation we can also refer to the data of percentage change in contribution of R&D (Research and Development) and IP (Intellectual Property) products towards labor productivity, R&D and IP might allude towards increasing using use of automation in the metal products manufacturing industry, a major part of which is steel wire.

**Technological and other innovations in the United States steel wire industry.**

Statistics and data-driven solutions to diagnose and solve spring manufacturing problems: Like all manufacturing industries, spring manufacturing faces problems of defective units as well as unoptimized manufacturing processes. The small booklet on page 23 of the magazine is a case in point. The small case involves the failure of tension spring hooks, when customers complained of a replacement tension spring failing within its useful life, Dan Sebastian, one of the former presidents of SMI (Spring Manufacturer's Institute), used data, statistics and data visualization to explain the processes on the assembly line, they recorded the data for many years and found that the defective springs were made at specific times. Upon investigation, it was found that at those times, inexperienced operators did the manual work required to assemble the mainspring, since it was a difficult assembly work, the naive workers made mistakes, which led to defective springs, so data, like other industries, is also used in used in the spring manufacturing industry. It is possible that we will see the adoption of Six-Sigma, Lean Manufacturing, as well as Lean Six-Sigma in the spring and wire manufacturing process across the board.

Many customers have been waiting for a device that can help them analyze surface defects in small diameter wires/cables/tubes during production. Being able to detect scratches, bubbles and marks on diameters less than 1mm was a far from obvious challenge. However, as usual, CERSA engineers rose to the challenge and now offer a revolutionary technology capable of detecting surface defects with diameters down to 20 µm. Based in France, CERSA-MCI is a leading global manufacturer of measurement devices for the fine wire, cable and fiber optics industries. Since 1981, CERSA has been offering solutions based on advanced technologies to help customers improve their production quality. Our mastery of physical phenomena, especially optical ones, and the use of the most innovative technologies allow us to offer levels of performance that meet current and future needs. The measuring principle of the SQM-F is comparable to a ring camera, which continuously analyzes the wire surface and displays a 2D image even at very high drawing speeds. Thanks to its exceptional performance (200,000 frames/sec, linear resolution of 18 µm) and coupled with the CIM Prod analysis software, the SQM-F allows you to spot, analyze and above all correct your errors on the spot, consequently improving yours end quality and reduce your rejects at the same time.

AIM Inc., one of the world's leading manufacturers of CNC machines for the production of wire and wire products, has developed a new CNC wire bending technology with Synchro technology and has released a model that adopts this technology, namely AFM 3Dx S SYNCHRO. This technology and machines are cutting-edge innovations in CNC wire and wire product manufacturing.

**Challenges in the Market**

**The industry suffers from supply shortages and delays in order processing due to disruptions in the supply chain.**

One of the biggest and ongoing challenges in the spring industry (that manufacturers face) is finding the supply of the right amount of wire at the right time. The challenge has only been compounded by the disruptions to both global and local supply chains caused by the Covid-19 pandemic.

There was a shortage of 80,000 truck drivers in the US last year and it is projected to increase in the coming years, which has caused other problems for the country's logistics and supply chain network. This resulted in empty shelves in many supermarkets as well as delays in the delivery of various products to the public, retailers and shops of all levels.

The recent Russia-Ukraine war has dealt another blow to the supply and logistics of steel, as well as raw materials used to make steel, such as coking coal, iron ore, pig iron, etc. The sea has been blocked by Russia, the only other way out for raw materials into the EU is via the railroad, which is limited by the border capacity, the tough sanctions against Russia from the US and the EU add another block. While in Ukraine 1/3 of steel is made in Mariupol, one of the hottest theaters of war.

A key takeaway from this challenge is that manufacturers have resorted to holding buffer stocks, supporting suppliers, and have also moved away from the JIT system. JIT stands for Just In Time System, which is both an inventory management and manufacturing process or methodology, a system used to make inventory management or manufacturing process more efficient and reduce inventory management costs, in JIT systems, manufacturers do not hold high stock levels, but only as much industry as is required for manufacturing and re-ordering according to the re-order time calculated for that particular JIT system. With pent-up demand and supply chains disrupted, manufacturers in the US steel wire industry have begun to hold buffer stocks and diversify their supplier portfolio as having a single supplier or just a few suppliers can lead to a dependency on those suppliers, resulting in shortages of important raw material stocks and even delays in the processing of large orders, which can endanger the integrity and reputation of the manufacturer in the market and in the industry. In this context, market, supply chain and sourcing intelligence become very important for manufacturers to help them charter through these difficult waters of the global supply chain.

**Raw material shortage and price increase:**

This shortage is mainly due to the Russia-Ukraine conflict, now we will discuss how this conflict, which escalated into a war at the end of February 2022, has led to a shortage of raw materials such as pig iron, steel, coking coal and as mentioned, it trades This report also deals with the basic raw materials that go into the production of steel wire.

First we need to discuss a little about the Russia-Ukraine War, a brief history of the conflict and finally how the war affected the vital supply of raw materials for the manufacture of steel wire.

Although the conflict between Russia and Ukraine escalated into war in February 2022, its history dates back to 2014 when the conflict erupted, it was 2014 after the “Maidan Revolution” or colloquially known in the world as the Ukrainian Revolution Dignity , in this revolution, which happened to happen in February 2014, exactly 8 years before the war between Russia and Ukraine. The Dignity Revolution led to the overthrow of Ukraine's then-President Victor Yanukovych, now Yanukovych was known as a pro-Russian leader and was seen as the leader of Ukraine to maintain close ties with Russia rather than the West (European Union and United States) the revolution was viewed by Russia as an illegal coup and Russia therefore did not recognize the new government led by Arseniy Yatsenyuk, who was initially the leader of the interim government and then himself became the official President of Ukraine in 2014. Arseniy signed a pact with the European Union, which Yanukovych did not do, Russia viewed the 2014 revolution in Ukraine as a tactic used by the West to eventually have Ukraine join the North Atlantic Treaty Organization or NATO and thereby expand its presence, Russia viewed this as a direct threat to its sovereignty and had warned if it ever joins NATO. Also in 2014, Russia invaded and annexed the Crimean Peninsula, further escalating the conflict between Russia and Ukraine.

The current war was self-constructed by 2015, because when Russia had started building up a military presence in small increments along its border with Ukraine, that build-up was initially seen by Ukraine and the West as a precautionary measure, but eventually it turned out to be the case was preparation for a full-scale invasion of Ukraine. Enough about the conflict between Russia and Ukraine, now let's talk about its impact on the steel and steel wire industries in the United States and the world. Apart from that, Russia is among the top 5 and Ukraine is among the top 15 steel producing countries in the world. They are also major suppliers of raw materials for steel making, including iron ore, pig iron, coking coal, etc. Russia is also one of the largest and most strategic suppliers of crude oil along with natural gas for the world, and especially for Russia, the countries of Europe.

We've all read about Russia blocking Ukraine's port access through the Black Sea, the news that one of Ukraine's largest steel mills in Mariupol was attacked and destroyed by Russian forces, and we know that the US gets 60% of its pig iron have imports from both these nations and hence the war has disrupted steelmaking in Russia by depressing prices and reducing the supply of raw materials for steel wire manufacture.

**Forecast for short term demand in the US steel wire market.**

In 2021, the global steel wire demand grew by 2.7% compared to 2020, this growth was much slower than the pre-pandemic level, but in 2022 the growth rate will continue to decline, falling to 0.4% in 2022 compared to 2021 , is forecast to rise to 2.2% in 2023. These forecasts, although calculated with accurate data, are still subject to uncertainties due to the unclear picture in the global supply chain of steel and steel-making raw materials, the two largest exporters of steel and steel-making raw materials in the world, the Russia and the Ukraine are, since the two nations are going through a war, the supply of steel and its raw materials has been adversely affected, resulting in rising prices around the world, this wartime situation has made forecasting difficult.

Two of the most important drivers of steel wire demand are the construction and automotive sectors. In 2021, the Chinese government imposed severe restrictions on infrastructure development and real estate companies, pushing down demand for steel and steel wire. Overall, demand for steel wire in China fell by 5.4% in 2021 compared to 2020. It is forecast to increase slightly in 2022 as the government makes efforts to stabilize the real estate sector and is forecast to grow by 1% in 2023. In the EU and US, demand for grew Steel wire in 2021 up 16.5%, despite the sporadic spread of Covid 19 by the EU and the US, steel wire demand had recovered in 2021, attributed to the Russia-Ukraine conflict Since the demand growth in 2022 down to 1.1% as both the US and EU are heavily dependent on Russia and Ukraine for raw materials for steelmaking, the demand for steel wire in the EU and US is forecast to drop in 2023 will increase by 2.4%.

**Legal / Regulatory / other specialist opinions:**

**ESG related legal and regulatory requirements for commercial manufacturers.**

1. **ESG reporting regulations** to become stringent in the USA in coming year or two. Albeit currently USA does not have laws or legal requirements for reporting ESG at the Federal level as of now, (which is unlike Europe), yet the **SEC (Securities and Exchange Commission)** in the March of 2021, announced creation of a climate and ESG task force to enforce adherence to regulations related to climate risks.
2. **The Financial stability oversight council (FSOC),** which is comprised of heads of various federal agencies like the Treasury, SEC, the Federal reserve board, and the Office of Comptroller of the Currency (OCC), recently issued a report on climate related financial risk, among other things also calls for new disclosures in financial statements, the report endorses building on the core concepts of the **(TCFD), Task force on Climate related Financial Risks.**

**Opinion**

**5 Important points to consider post-M&A projects.**

1. Distinguish between ongoing resource needs versus one-time, deal-specific expertise.
2. Take advantage of windows of opportunity when teams are primed for change.
3. Ensure smooth integration of people, departments, and cultures.
4. Learn to identify and deploy the right resources to streamline processes.
5. Build a unified culture that’s focused on the future.