

2021.10.18

## InterRisk Thai Report <2021 No.13>

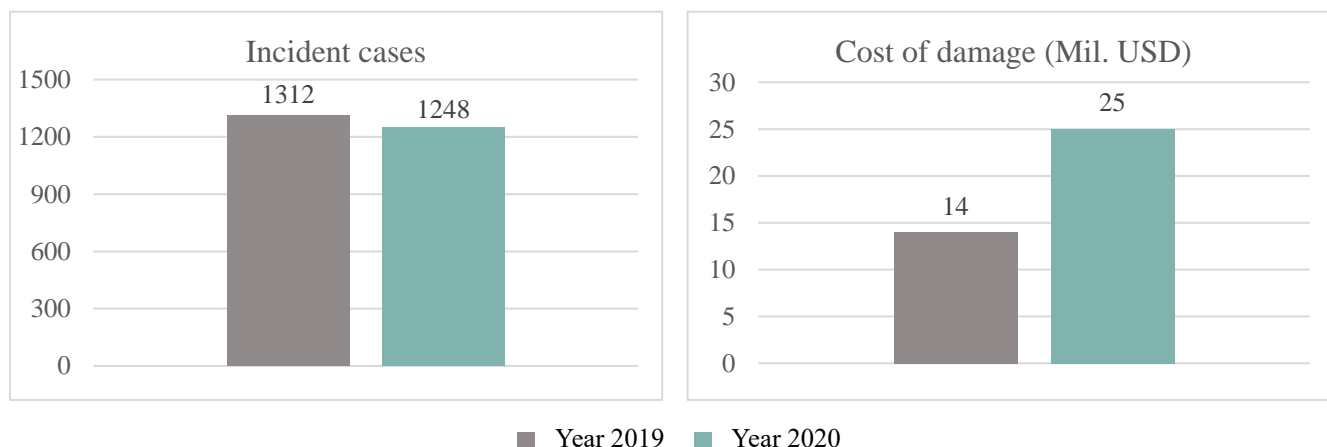
### Statistical Data of Fire Incidents During COVID-19 Pandemic

#### 【Conclusion】

- Fire incidents keep occurring during COVID-19 pandemic although some industries reduce production capacity.
- Damages from fire in year 2020 is two times higher in year 2019.
- The fire incident occurred during the absence of workers for more than 70%.
- Most common cause of fire incidents comes from short circuit.

As you are aware of COVID-19 pandemic, this pandemic has been happening since the end of the year 2018. Many companies were interrupted during this period. However, production sectors operate continually so the risk of the accident remains in the industry.

The statistical data from the Department of Disaster Prevention and Mitigation of Thailand shows about fire incidents in 2019. The cost of the damage caused by the fire was about 25 million USD in 2020 which was two times higher than 2019 (In 2019, the cost of damage was 14 million USD), even though the number of fire incidents in 2019 (1,312 times) was higher than 2020 (1,248 times).



**Figure 1:** Statistic data from the Department of Disaster Prevention and Mitigation of Thailand

From the past fire incidents, the cost of each fire from industry business is higher than 10 million baht (around 0.3 million USD). It can imply that fire in the industry is more severe and losses. The statistical data from the Department of Industrial Works shows that fire incidents occurred 42 times in 2018 and 46 times in 2019. The most frequent type of industry that fire incidents occurred are the maintenance, metal casting, warehouse, plastic, foam, paper, and rubber industries.

Moreover, the statistical data from the insurance sector recorded that the fire incident occurred during the absence of workers for more than 70%. During that period, the number of observers is less than a working hour. Especially during the COVID-19 pandemic, some factories control the number of personnel in each area. Therefore, fire watch in blind spot might insufficient. The response for fire incidents can be delayed which can cause extreme fire incidents.

The examples below are the examples of fire incidents occurred during COVID-19 which the fire incidents caused damages for industry business.

**Incident case 1: September 23, 2019**

A fire incident occurred at 8:00 P.M. at the pulp warehouse, Chonburi province. The warehouse was covered with fire because the warehouse kept more than 3,000 tons of pulp. The pulp is the fuel to help the fire spread. Due to fire, it makes roof structure of warehouse collapse. Firefighting was using high-pressure water to extinguish the fire, removed the pulp by using a backhoe and removed the gas cylinders to prevent the explosion. The fire was extinguished 18 hours later by 30 fire trucks. For the cause of the fire incident, the officer presumed that it came from cigarette butts then the flakes touched the pulp and catch fire. From this fire incident, the cost of damage is about 60 million baht (1.8 million USD).

**Incident case 2: September 30, 2020**

At 10:00 P.M., there was fire incident occurred at the manufacture of furniture located in Amata City Pluak Daeng Industrial Estate, Rayong Province. More than 20 fire trucks were used for firefighting. The fire spread rapidly because there were many woods stored inside the factory. The fire was extinguished for more than 3 hours and fire awareness was still conducted in case of the fire reignition. For the cause of the incident, factory's staff said that the fire started to occur at the hot-cold water dispenser. Then the fire spread to paper boxes and other combustible materials nearby the scene. The staff presumed that the cause was the short circuit of the hot-cold water dispenser. From this fire incident, the cost of damage is more than 70 million baht (2 million USD).

**Incident case 3: December 2, 2020**

At 11:20 P.M., there was fire incident occurred at warehouse for chemical storage. The chemical is Sodium Hydrogen Sulfide. This chemical is used for food preservatives, paper production, bleaching, soap, etc. A high quantity of chemicals was stored inside the warehouse which the fire explosion occurred continuously. More than 10 fire trucks were used for extinguishing the fire but the fire could not be controlled. Therefore, firefighting officers used foam to extinguish the fire. The fire was extinguished for more than 2 hours. From the investigation, the factory owner said that the staff

was transporting the chemical tanks inside the warehouse. During the transportation, there were sparks at the chemical tanks. The factory owner presumed that fire came from sparks at chemical tanks which are metal tanks. From this fire incident, the cost of damage is more than 10 million baht (0.3 million USD).

From the mentioned fire incidents occurred in the industries, the incidents caused large amount of damage. The most common cause of fire incidents comes from tiny sparks and then it was widely spread, especially during the absence of workers. Therefore, fire safety audit and inspection are a necessity for the fire prevention. It can help workers to aware of the risks that they might overlook such as electrical inspection, chemical transportation, chemical storage, proper fire extinguishing equipment, and housekeeping in the working area.

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