



CONSTRUCTION  
INDUSTRY COUNCIL  
建造業議會

# 特殊複式吊索 Slingmax

中國路橋工程有限責任公司

China Road and Bridge Corporation

Three Runway System Project  
Contract 3302 Eastern Vehicular Tunnel Advance Works

# Slingmax Synthetic Sling (Single-Path Roundslings)



中國路橋工程有限責任公司  
CHINA ROAD AND BRIDGE CORPORATION

# Background

## There are lots of accident related to lifting failure

**Date** : 5 Nov 2020  
**Location** : Tin Shui Wai, Hong Kong  
**Severity** : 1 Dead



**Circumstances:**  
 An operator was pressed by a stock of materials being lifted by a lorry crane in a warehouse. I/P got multiple injuries and was unconscious. He was conveyed to hospital where he was pronounced dead.

**Date** : 15 Oct 2020  
**Location** : Central-Kowloon  
**Severity** : N/A



**Circumstances:**  
 An excavator accidentally dropped into a shaft in the course of a lifting operation at a work site of Central Kowloon Route – Central Tunnel project.



No person was injured.

**Date** : 27 Oct 2020  
**Location** : Fanling, NT  
**Severity** : 1 serious injured



**Circumstances:**  
 A worker working at the bottom of an excavation in where he was, suspended to stroke by a bulldozer under lifting.

The I/P's head was seriously injured and was unconscious. Sent to the hospital and condition is critical.



**Date:** 19 Jun 2020  
**Location:** Timber depot at Tin Shui Wai  
**Severity:** 1 dead



**Circumstances:**  
 A worker while operating a gantry crane by means of a pendant control panel to move a bundle being lifted, who was then **trapped between it and other bundles of wooden batters in a pile nearby**. The worker sustained serious injury and passed away on the following day.

**Date:** 11 Jun 2020  
**Location:** Recycling yard in Yuen Long



**Circumstances:**  
 A visitor was hit and killed by a swinging I-beam.

**Date:** 2 March 2019  
**Location:** Kwun Tong



**Info from Newspaper:**  
 The concerned worker was working on scaffolding on the 8<sup>th</sup> floor when he was hit on the head by a falling piece of wood. He lost his balance and fell to the 6<sup>th</sup> floor where he was found unconscious.

The cause of accident in under investigation by Labour Department.



## 帆布帶吊工作台 疑不勝負荷



2017年3月30日



星島日報相片

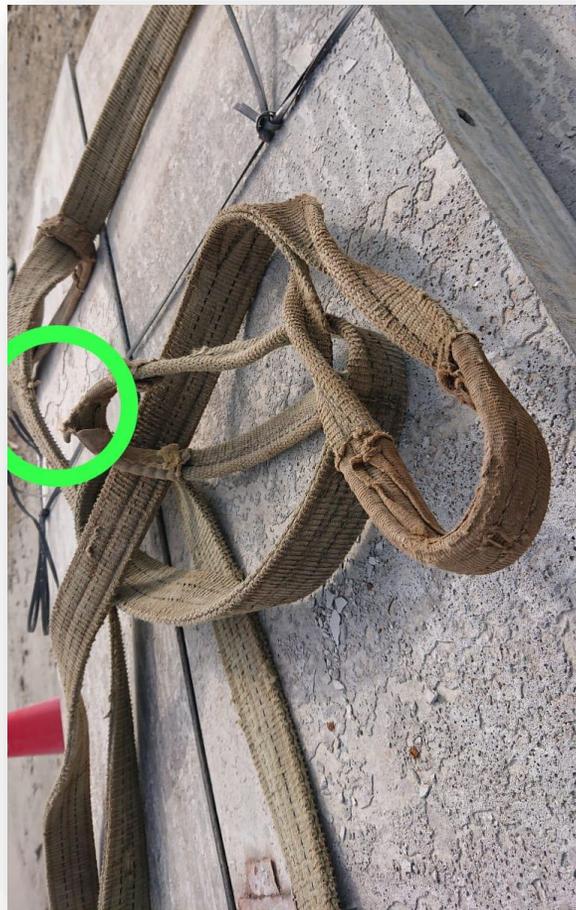
【星島日報報道】港珠澳大橋興建六年來，昨再度發生嚴重工業意外，有業界指出，肇事工作平台屬臨時性，以帆布帶懸吊，不排除帆布帶不勝負荷而斷裂。今年只過了不足三個月，至少已發生十一宗工業慘劇，是去年的總和，當局應從速改善。三個月意外是去年總和 連建築總工會理事周聯輝稱，望海的平台以金屬建造，現場所見相信是由帆布帶作懸吊式掛在大橋底進行工程，屬臨時性質，而使用帆布帶是正常的一種支撐方式，但必須符合相關法例規定。周指出，平台總重量不可超過帆布帶最高負荷，由於工作地點屬空曠，帆布帶易受風雨破壞及與橋身摩擦破壞，故工人每天工作前均要作出詳細檢查，而帆布帶每半年須送至公正行檢驗，及格後才可繼續使用。今次工作平台突然墜海，他估計是帆布帶不勝負荷，加上台上三名工人安全帶俱扣在工作台，引致一同拖入海中釀成慘劇。他建議，工人在此類工作平台工作時，可將安全帶的另一端，繫在固定物的橫樑上，即使工作平台脫，亦不致跟隨墜下。工業傷亡權益會總幹事陳錦棠稱，今年嚴重工業意外頻生，至昨日為止不足三個月內，至少已發生十一宗致命工業意外，是去年全年的總和，情況十分嚴重，相信是當局執法不嚴及罰則不足，導致僱主輕視工業安全問題，要求當局盡快改善。立法會議員郭家麒指出，港珠澳大橋地處，每天有五千名工人工作，環境危險混亂，現會即時去信路政署暫停相關工程，須待改善安全措施後才可恢復工程。立法會議員尹兆堅亦擔心有人為了趕工，罔顧工人性命安全，要求當局採取果斷措施，即時要求承建商審視工程上的安全措施是否足夠及作出改善。本報記者 港聞

責任

ORPORATION

# Background

How to identify if the webbing sling is fit for use or not? Overload? Damaged?



# Slingmax Synthetic Sling (Single Path)

## Slingmax Synthetic Sling (Single Path)

- Length: 6m
- S.W.L.: 2T

## Application on site:

- General site material
- Vertical lifting of bended rebar
- Concrete pipe



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# Slingmax V.S. Traditional Webbing Sling

**Slingmax - Length: 6m; S.W.L.: 2T**



**Main differences of Slingmax**

- Compose of two layers
- Round sling
- Thicker
- Wider

**Traditional Webbing sling - Length: 6m; S.W.L.: 2T**



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# Application on Lifting of General Site Materials



- ◆ Harder to pass underneath the materials
- ◆ Need to provide a specific training for rigger



# Application on Vertical Lifting of Bended Rebar



- ◆ **Secure**
- ◆ **Not easy to be scratched by the rebar**



# Application on Vertical Lifting of Bended Rebar



- ◆ Little holes were observed after using for 5 months



# Application on Lifting of Concrete Pipe



- ◆ Slingmax is wider and softer
- ◆ Not easy to damage the concrete pipe



# Comparison - Marking



## Tradition

- Marking is easy to lose
- Hard to see the marking



## Slingmax

- Marking is stitched on the sling
- Clear marking



# Check-Fast® Inspection System



If damage: Optical Fiber **No light -> Stop**



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# Check-Fast® Inspection System



**If overload: Magic String (EWI) Gone -> Stop**



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# Comparison

6m (L), S.W.L.: 2T	Traditional Webbing Sling	Slingmax Synthetic Sling (Single Path)
<b>Sling</b>	1 layer	2 layers
<b>Weight</b>	Similar	
<b>Inspection method</b>	Physical damage	Optical fiber Magic string Physical damage
<b>Application</b>	Lightweight general site materials	Heavy load in one unit
<b>Price</b>	~\$120	~\$1200



# End



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