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# DDAS Accident Report 813

## Accident details

<b>Report date:</b> 06/04/2019	<b>Accident number:</b> 813
<b>Accident time:</b> P.M.	<b>Accident Date:</b> 11/10/2018
<b>Where it occurred:</b> Laoshan Mountain, Malipo County, Yunnan Province	<b>Country:</b> China
<b>Primary cause:</b> Management/control inadequacy (?)	<b>Secondary cause:</b> Field control inadequacy (?)
<b>Class:</b> Handling accident	<b>Date of main report:</b> 06/12/2018
<b>ID original source:</b> Press	<b>Name of source:</b> Press
<b>Organisation:</b> [Name removed]	
<b>Mine/device:</b> PMN or Type 58 AP blast	<b>Ground condition:</b> rocks/stones, steep slope, trees
<b>Date record created:</b> 06/04/2019	<b>Date last modified:</b> 06/04/2019
<b>No of victims:</b> 1	<b>No of documents:</b> 1

## Map details

<b>Longitude:</b>	<b>Latitude:</b>
<b>Alt. coord. system:</b> Not recorded	<b>Coordinates fixed by:</b>

## Accident Notes

inadequate investigation (?)  
inadequate training (?)  
no independent investigation available (?)  
safety distances ignored (?)  
visor not worn or worn raised (?)  
inadequate equipment (?)

## Accident report

The report of this accident is compiled from press reports, edited for anonymity. Text in square brackets [ ] is editorial.

Source: Global Times Published: 2018/12/6 18:44:36  
<http://www.globaltimes.cn/content/1130674.shtml>

Soldier loses both hands and eyes from a blast while clearing mines along Vietnam border



Soldiers visit [the Victim] in the hospital on November 20 in Yunnan Province.

"Step back, let me do it," 27-year-old [Victim] told his partner [name removed] before a land mine exploded in front of him. A month later, the words still echo in [his partner's] mind.

In a land mine clearance operation along the China-Vietnam border in Yunnan Province, Southwest China on October 11, [the Victim] chose to handle the complex situation by himself after asking his partner to step back. The explosion took [the Victim]'s both hands and eyes.

"One injured is better than two injured," [the Victim] said in an interview with China Central Television a month after the accident. His eyes were still covered with gauze.

The field where [the Victim] was working in that day is located in the jungle of a remote mountain in Malipo county of Yunnan Province. After the explosion took place in the afternoon, [the Victim] was severely injured and in a coma.

"I saw blood all over his face, and his hands were both gone," [his partner] said in the interview. "His anti-exposure suit was shredded into pieces, and found six meters away from him."

"He was in a great pain. I saw him grinding his teeth and shivering, but heard not a single groan," said [name removed], deputy captain of the land mine clearance team. A military doctor gave [the Victim] first aid before [the Victim] was sent to a hospital in Malipo county.

On the second morning, [the Victim] was transferred to a military hospital. The hospital organized a special medical team, and [the Victim]'s situation became stable after three hours of treatment. However, the surgeons removed both of [the Victim]'s eyes.

[The Victim] had to face the tough reality of being blind and missing his hands with a strong mind when he was lying in the ward. His family, the military and the hospital chose to conceal the news from him at the beginning, out of fear that the sad news might influence his recovery. The hospital finally decided to tell him the truth on November 17 when he was getting better.

[The Victim] was surprisingly calm when he heard the truth. He even tried to reassure his parents and a psychologist that he is fine. "I was prepared for the bad news even before they told me the truth," [he] said.



Soldiers are looking for and removing land mines along the Vietnam border in Yunnan Province.

[The soldiers are using four tine rakes and appear to be wearing a kind of high soled blast boot. No safety distances are being used and no area marking system. It is not credible that they could actually walk over that ground wearing those boots, so it is likely that this picture was posed for journalists. However, in other pictures held on file there is no area marking and no application of safe working distances.]

[The Victim] joined the army in 2010. Five years later, he applied to work in a land mine team that was undergoing the third large-scale land mine clearance along the Yunnan section of the China-Vietnam border. The operation kicked off in 2015.

"I am honoured and proud to take part in mine clearance work, because I applied for and signed in for the job, and I got approved," said [the Victim]. "But I had no idea about how dangerous the work was until I saw the handicapped villagers along the boarder due to land mines... Villagers get injured in their own crop fields, so I want to restore a safe landscape and bring serenity to the villagers."

Thirty years ago, this was the front line of the Chinese-Vietnam War. Land mines were the most effective weapon to impede the enemies. Soldiers would spend their time laying mines in the short time when both sides weren't shooting.

Minefields along the China-Vietnam border in Yunnan are deemed the most difficult to clear in the world. A great number of land mines of all types are distributed in this area. With the passage of time, the land shifts and sinks, which makes the situation in the fields complicated and hard to analyze.

Land mine removal personnel are injured frequently.

After the accident maimed [the Victim], people wondered why high-tech devices such as robots or mine clearance vessels aren't used. In response to this question, [name removed] said the landscape of the mountainous area was not suitable. There is no road except for steep hills that are hard to walk along, let alone bring bulky machines. The only way to search and remove land mines there is with humans on foot.

Over the past three years, [the Victim] had entered minefields more than 1,000 times. He has removed more than 150 tons of bombs, 400 land mines and handled over 20 emergency situations.

On the afternoon of November 16, the last field was handed over to the local residents, marking the official completion of the third large-scale land mine clearance operation in the Yunnan section of the China-Vietnam boarder. On November 18, [the Victim] was awarded the first-class merit citation by the military.

[http://www.chinadaily.com.cn/china/2017-11/29/content\\_35118834.htm](http://www.chinadaily.com.cn/china/2017-11/29/content_35118834.htm)

The area was a major battleground during a series of border clashes that flared up sporadically from the late 1970s to 1989. Tens of thousands of mines were left behind when

the fighting ended. Two previous operations — 1992-94 and 1997-99 — removed mines and unexploded ordnance on one side of the mountain.

"The mission is extremely dangerous because of the widespread and complex distribution of the land mines," said [name removed], a mine-sweeping instructor. Troops have to climb steep mountain slopes wearing protective gear. "Our robots and other high-tech equipment is virtually useless here because of the steep slopes and dense jungle," he added.

<http://www.globaltimes.cn/content/1092197.shtml>

[The photograph shows the mines, which appear to be Type 58 AP blast mines, the Chinese copy of the Russian PMN containing at least 200g of TNT.]



[The photograph shows a deminer working with visor raised and both hands exposed. There is no area marking in evidence and the detector is placed ahead of the area being searched.]

<http://www.ecns.cn/news/feature/2018-12-07/detail-ifzanuxq9376459-p2.shtml>

The news that [the Victim] was hurt badly while dismantling a landmine by hand went around not just in [Name removed]'s village but on Chinese social media.

[Name removed], the deputy team leader for a PLA mine-clearing team that [the Victim] worked for... explained that... in Laoshan Mountain where landmines are covered by tree branches and wild grass, "latest technology cannot operate properly."

Though [the Victim] was injured, his fellow soldiers continued the mine-clearing operation. On November 16, minefields near China's border with Vietnam were declared to be completely cleared. Soldiers walked through the minefields, hand in hand

## Victim Report

<b>Victim number:</b> 1017	<b>Name:</b> [Name removed]
<b>Age:</b> 27	<b>Gender:</b> Male
<b>Status:</b> deminer	<b>Fit for work:</b> no
<b>Compensation:</b> Not made available	<b>Time to hospital:</b> Not recorded
<b>Protection issued:</b> Exposure suit	<b>Protection used:</b> Exposure suit

### Summary of injuries:

INJURIES: severe Face

AMPUTATION/LOSS: Eyes both; hands both.

COMMENT: See Medical report

### Medical report

No formal medical report was made available. The following is copied from press reports.

"I saw blood all over his face, and his hands were both gone," [his partner] said in the interview. "His anti-exposure suit was shredded into pieces, and found six meters away from him."

"He was in a great pain. I saw him grinding his teeth and shivering, but heard not a single groan," said [name removed], deputy captain of the land mine clearance team. A military doctor gave [the Victim] first aid before [the Victim] was sent to a hospital in Malipo county.

On the second morning, [the Victim] was transferred to a military hospital. The hospital organized a special medical team, and [the Victim]'s situation became stable after three hours of treatment. However, the surgeons removed both of [the Victim's] eyes.

[The Victim] had to face the tough reality of being blind and missing his hands with a strong mind when he was lying in the ward. His family, the military and the hospital chose to conceal the news from him at the beginning, out of fear that the sad news might influence his recovery. The hospital finally decided to tell him the truth on November 17 when he was getting better.

### Analysis

The primary cause of this accident is listed as a 'Management Control Inadequacy' because the demining group's operating procedures apparently allowed the deminers to work without using area marking, safe working distances, or wearing PPE appropriately. The group's senior managers are responsible for ensuring that the approved operating procedures are fit for purpose and for supplying appropriate equipment.

The Victim was defusing a mine when the accident occurred. Although no particular mine is mentioned, a Chinese Type 58 anti-personnel blast mine is inferred because it is shown in photographs and a fragmentation mine would have been likely to have inflicted far worse injuries.



The Victim is reported to have defuzed hundred of mines before so can be presumed to have been experienced and skilled. It is not clear why he sent his partner away (which appears to have been unusual) so it is possible that the condition of the mine raised concerns. The secondary cause of this accident is listed as a 'Field control inadequacy' because, although the Victim may have been working exactly as he was instructed to work when the accident occurred, he was obviously not wearing PPE correctly and this error was not corrected by field supervisors. If one error was missed, it is possible that other errors were also not corrected.

Although the photographs of deminers given to the press show the deminers with body armour suits, helmets and visors, the loss of both eyes makes it obvious that the victim's visor was either not being worn or was being worn raised at the time. The 'Inadequate PPE' listed under 'Notes' refers to the Victim's 'anti-exposure' suit which was reported to have been 'shredded' and thrown 6 metres away. This should not have happened with any appropriate body armour and is the 'inadequate equipment' listed under notes. The visors may also have been inadequate because, although unusually thick, the helmet mounted visors shown in the photographs are too short to prevent a blast on the ground getting beneath them.

This demining team involved obviously do not have required safety distances because the Victim was praised for sending his partner away before the accident, from which I infer that the IMAS Safety/Working distances were either unknown or being systematically ignored.

The 'Inadequate training' listed under notes refers to the fact that the training did not prepare the deminers to work to International Mine Action Standards. The failure to use area marking makes it impossible to know whether their search was thorough and makes it likely that some hazards were left behind.

The 'Inadequate investigation' listed under 'Notes' refers to the fact that no internal or independent investigation has been made available.