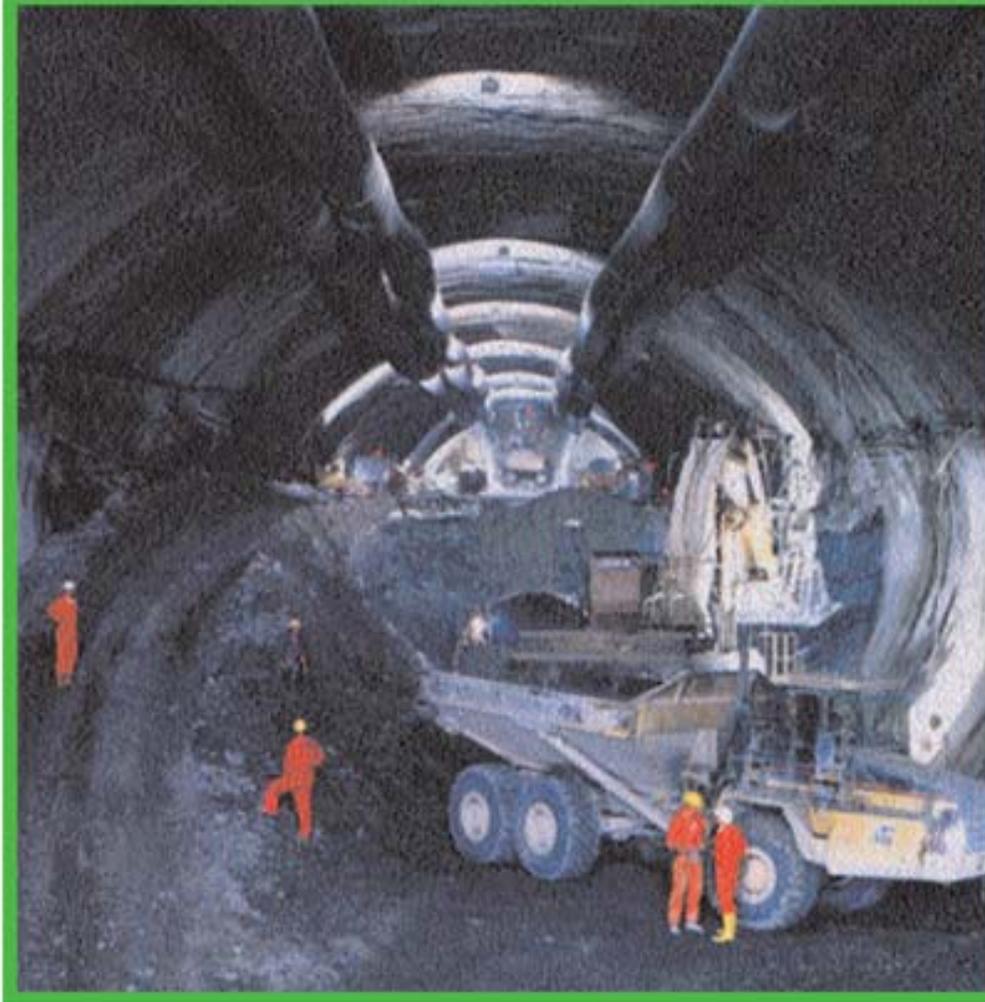


التشغيل الآمن في
تنفيذ الأعمال النفقية

Safe Working In Tunnelling

This document is written
for tunnel workers
and first line supervision



عزيزى العامل فى تنفيذ الأنفاق:

Safe Working In Tunnelling

التشغيل الآمن فى تنفيذ الأعمال النفقية

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"ITA"
"ITA" "TBG"
"ETS"

١ المهتمات والأدوات الخاصة بالعاملين

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٢ تجهيزات النفق ١٢

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٣ المشايات الموصلة إلى مواقع العمل

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٤ أعمال الحفر

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٥ التدعيم الابتدائي ٤٨

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٦ النقل ٧٠

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٧ التدعيم النهائي ٩٢

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٨ ماكينة حفر الأنفاق (TBM) ١٠٠

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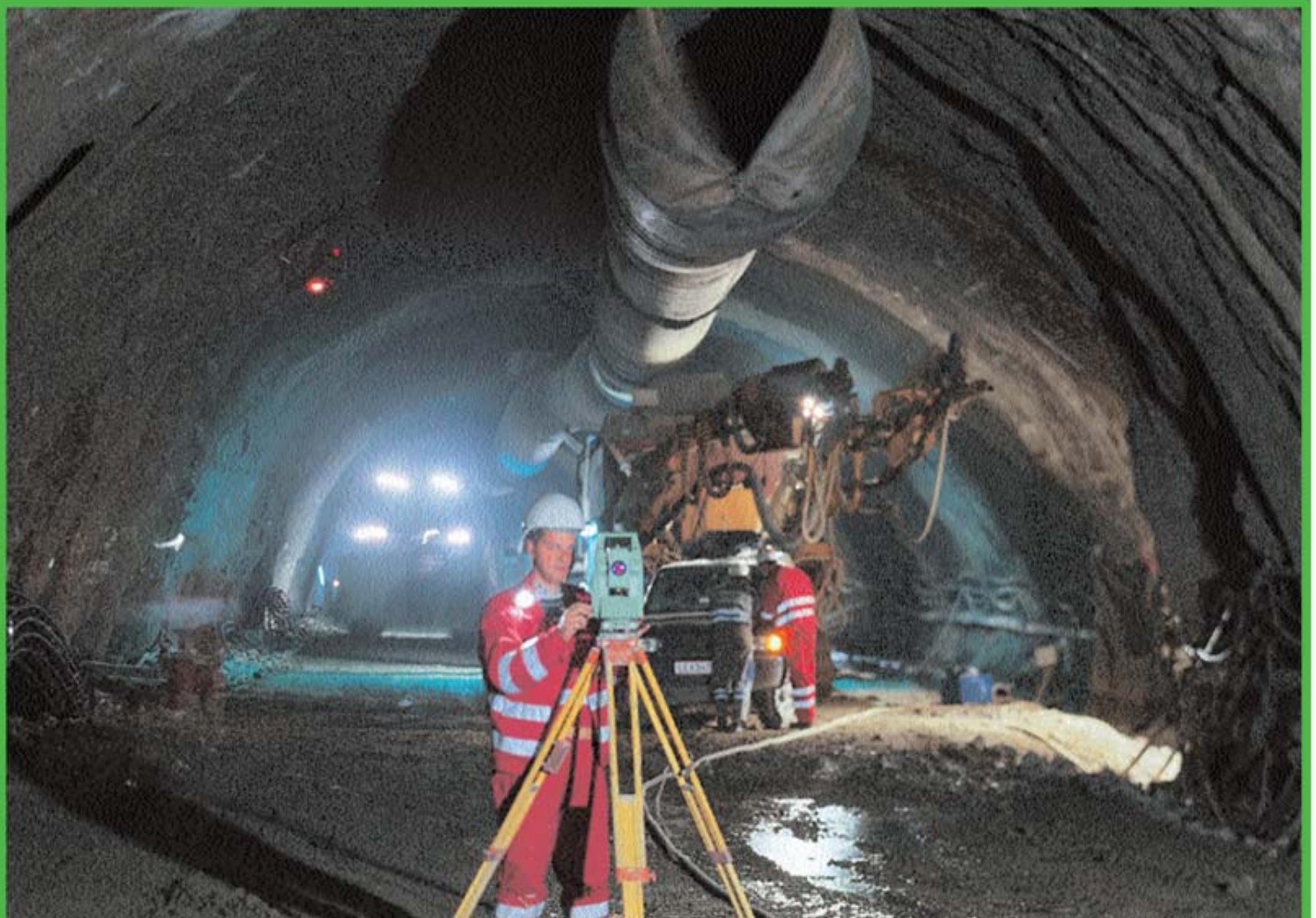
٩ المواد السامة بالهواء المستنشق ١١٢

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١٠ الإسعافات الأولية ١١٨

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المهمات والأدوات الخاصة بالعاملين



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ملابس الحماية الشخصية



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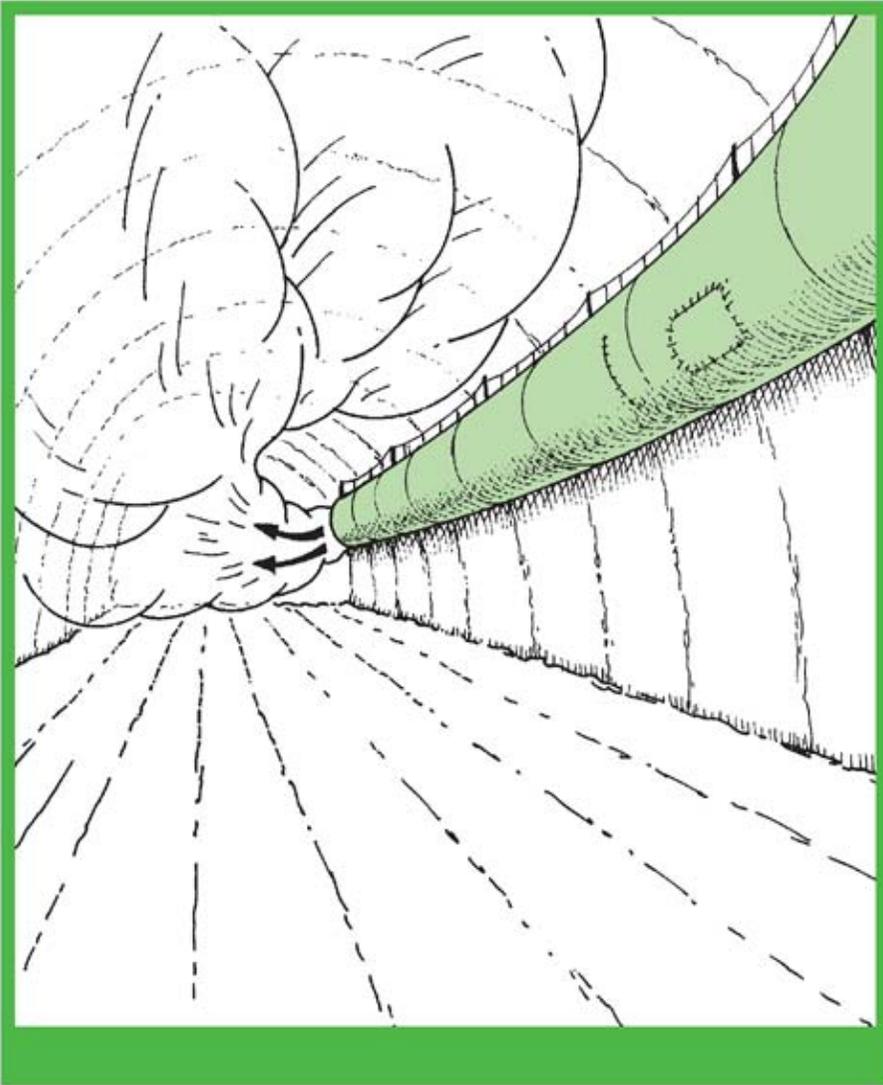
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ملابس الحماية الشخصية

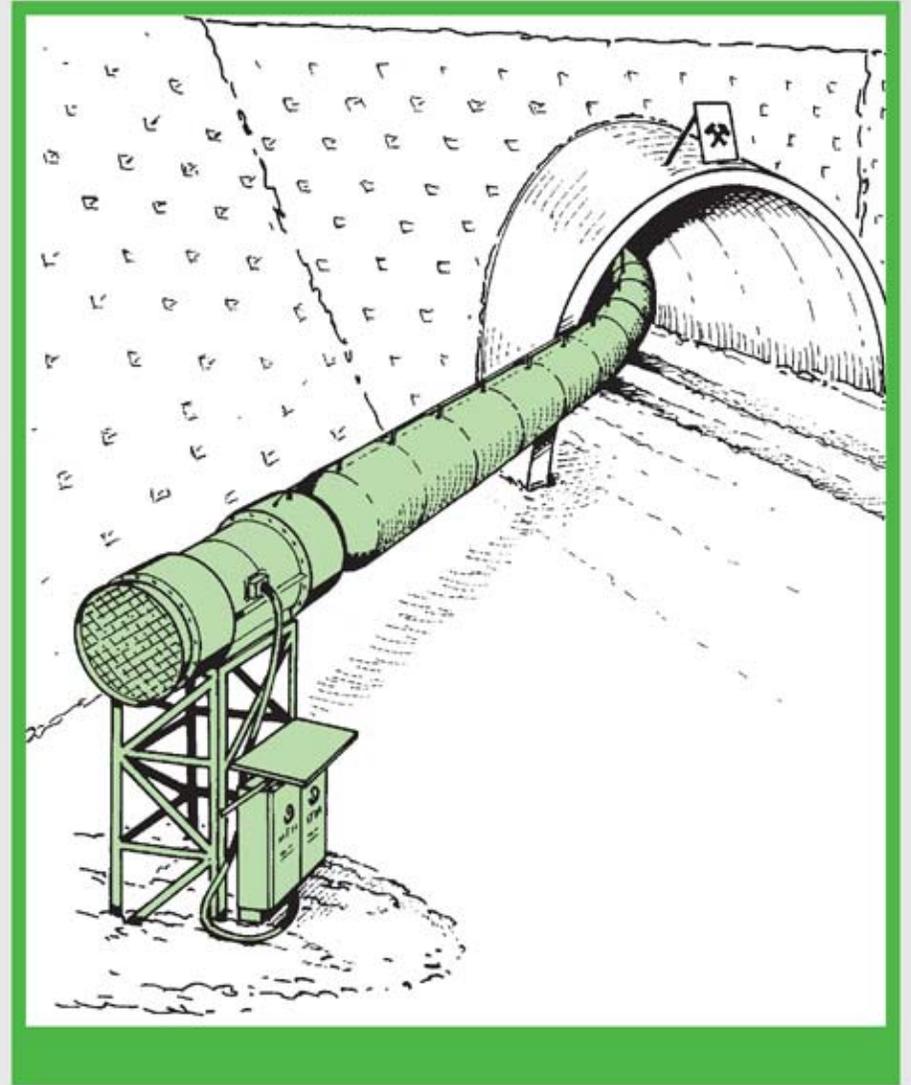


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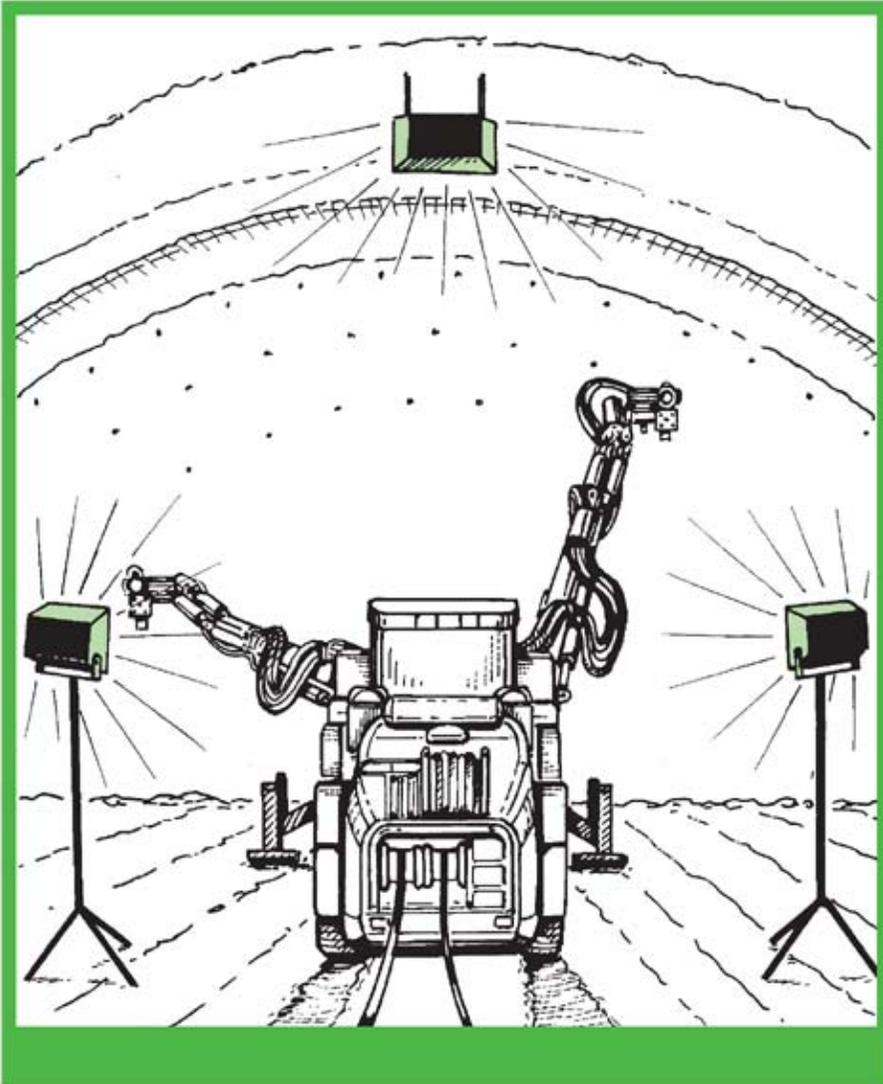




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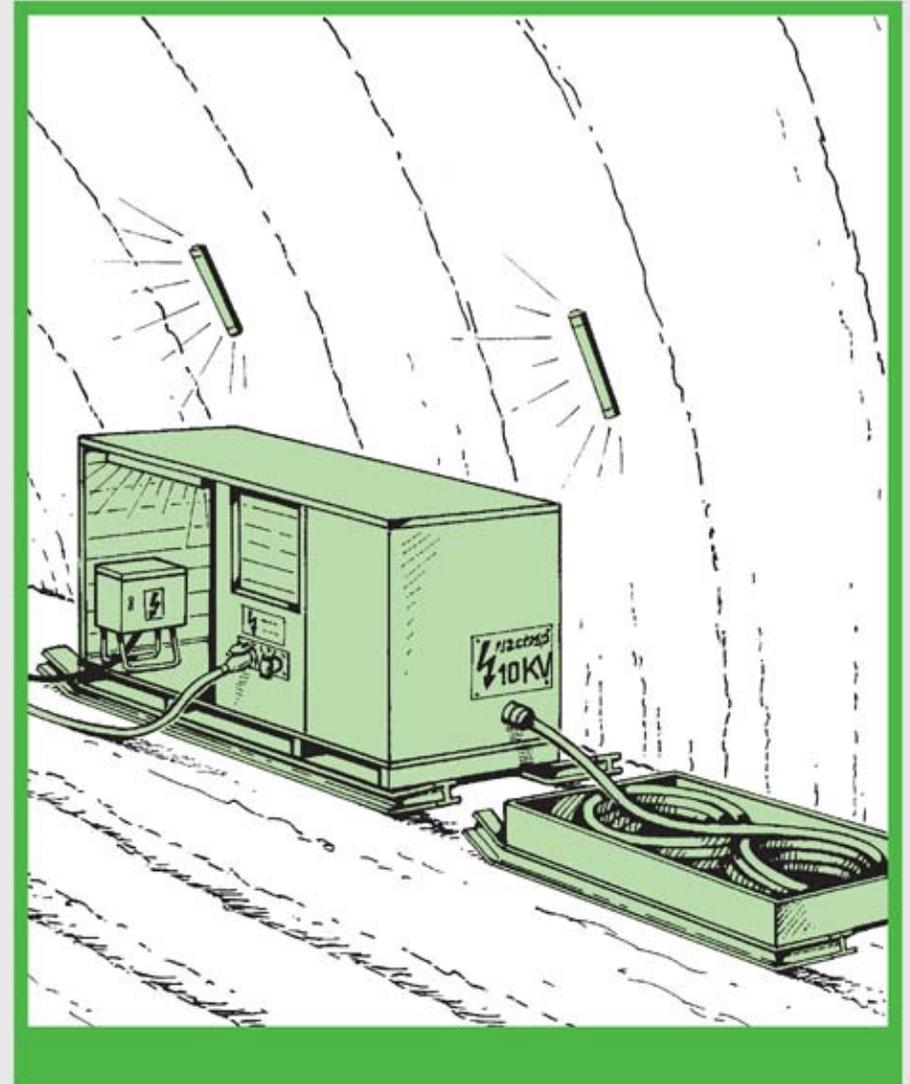
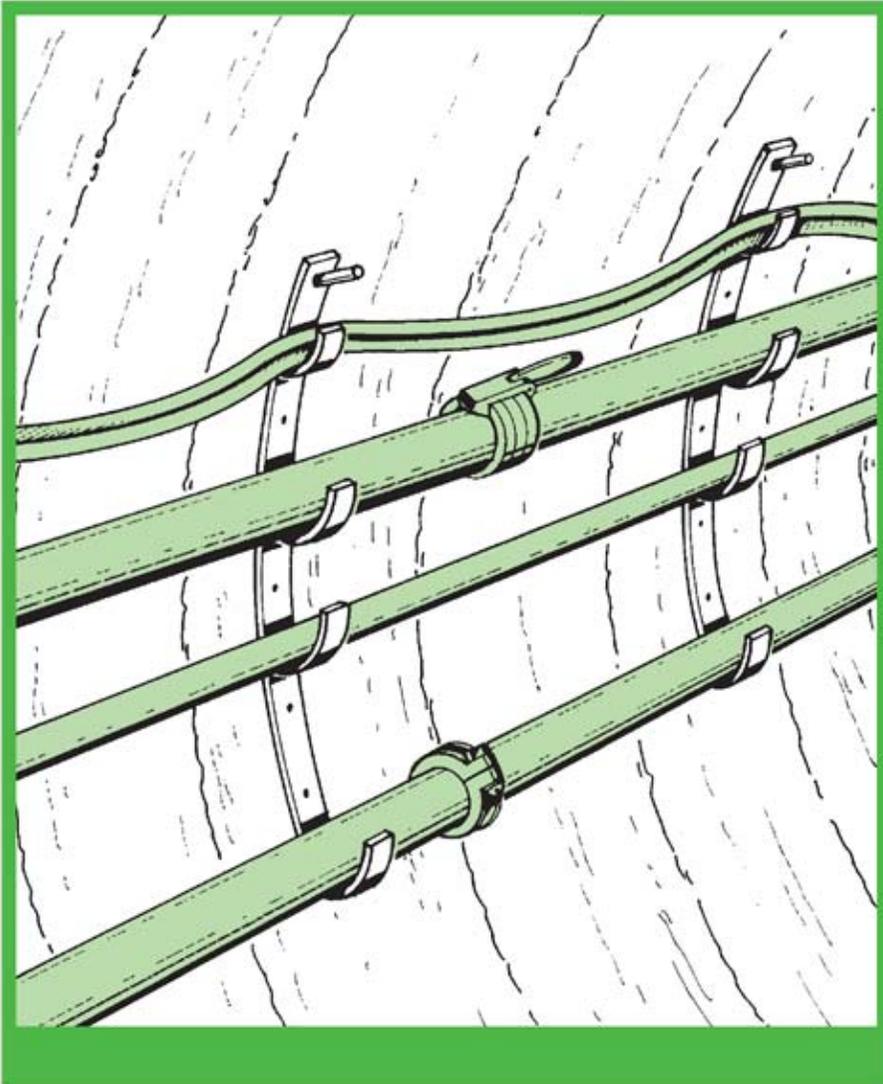


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التجهيزات الكهربائية وخطوط الإمداد



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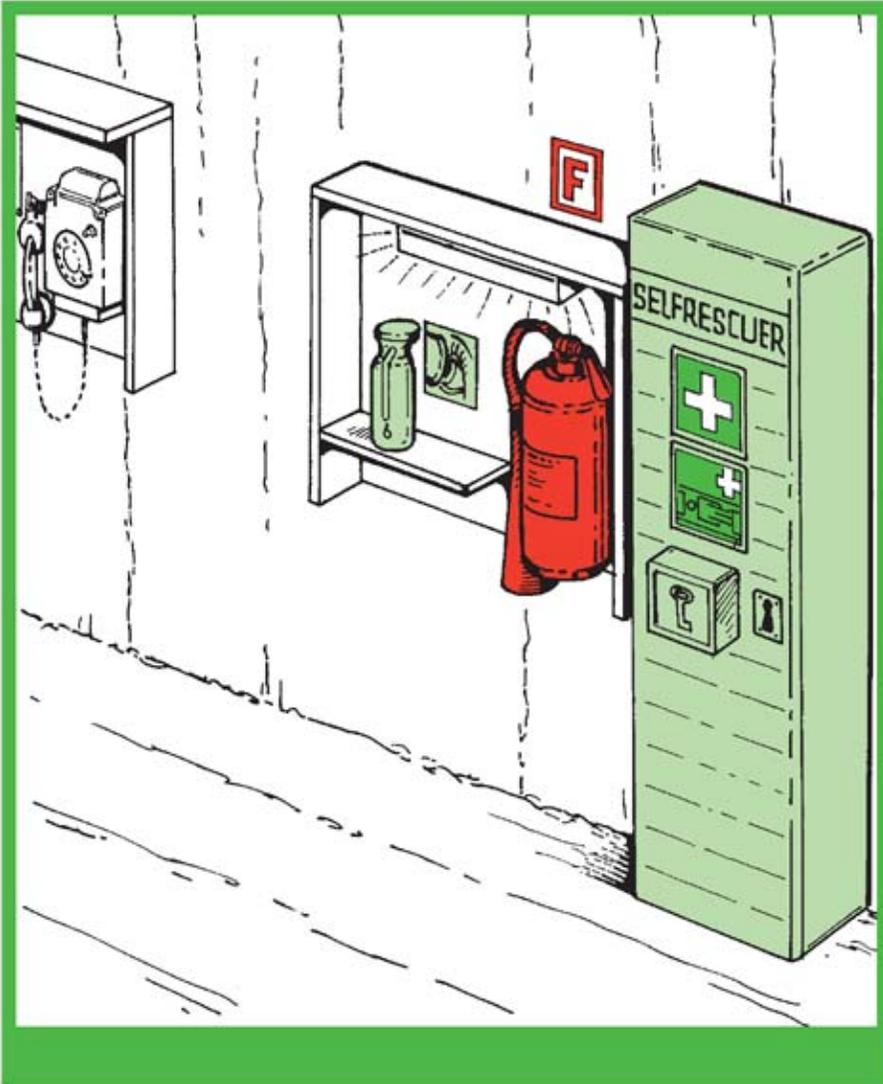
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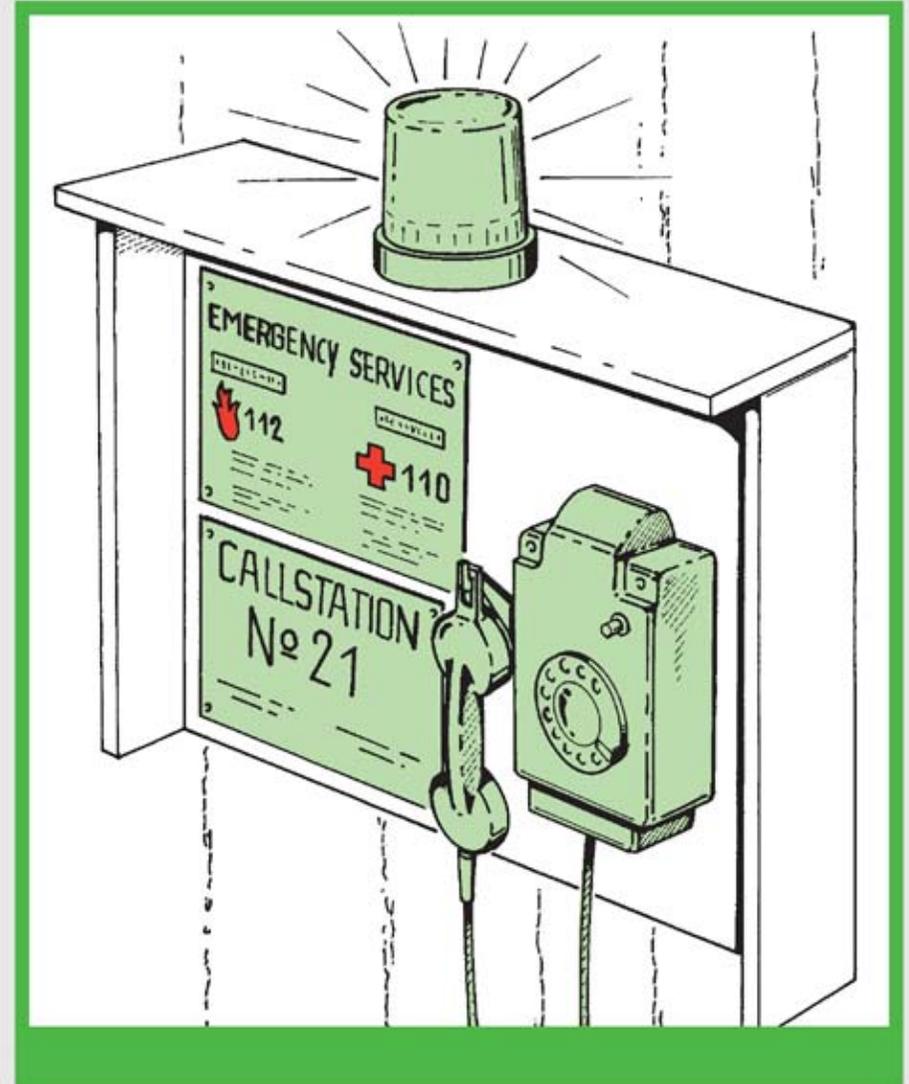
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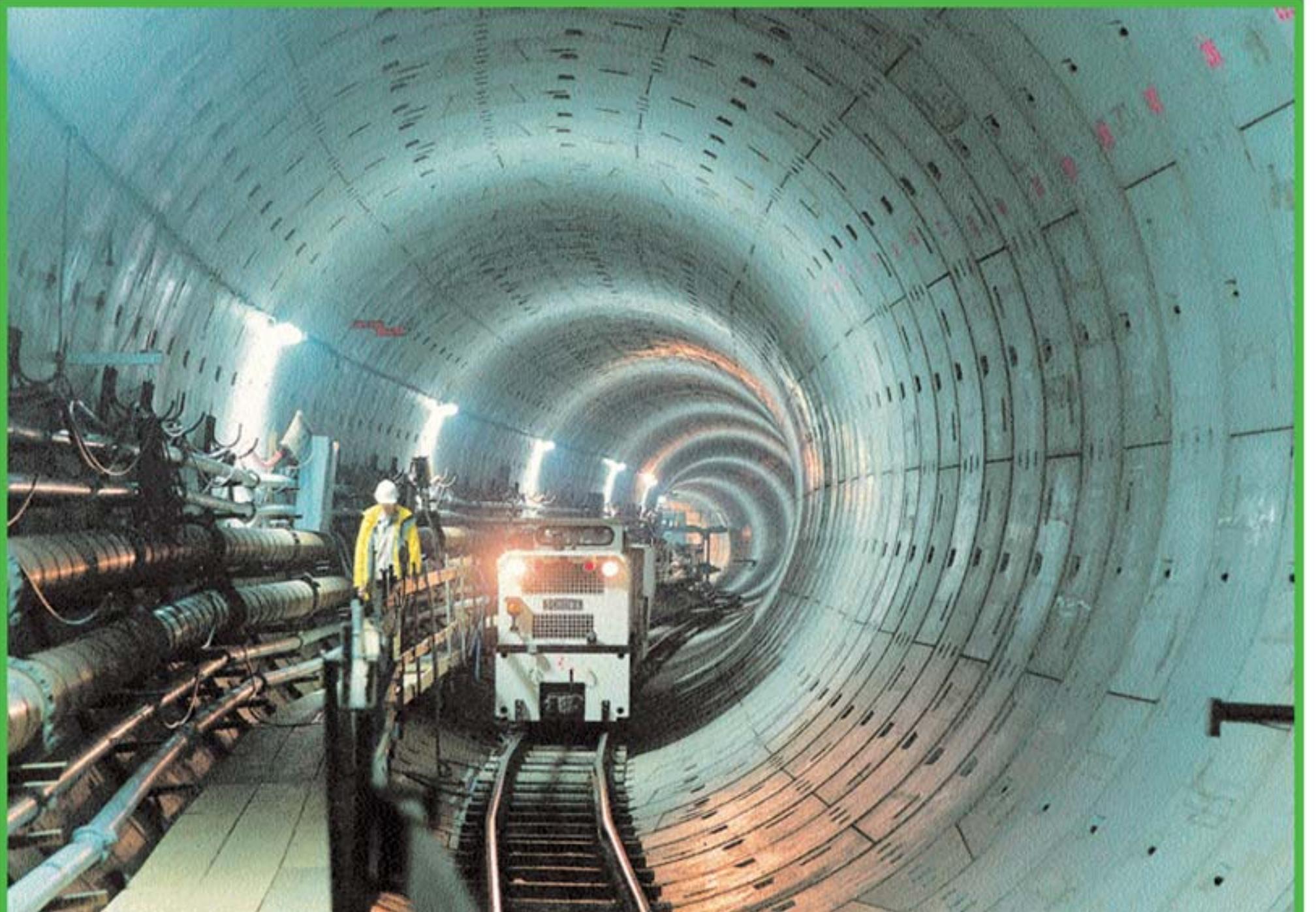
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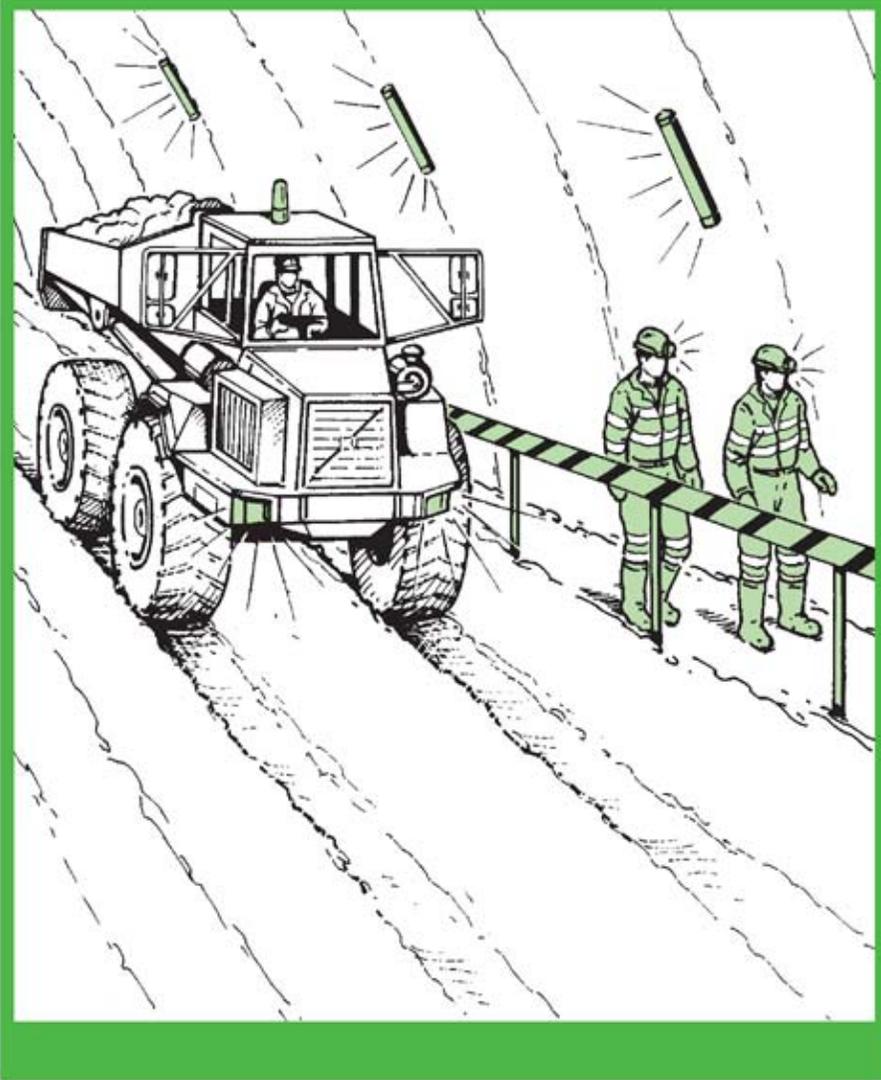


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مشايات بدون وجود خطوط سكك حديدية

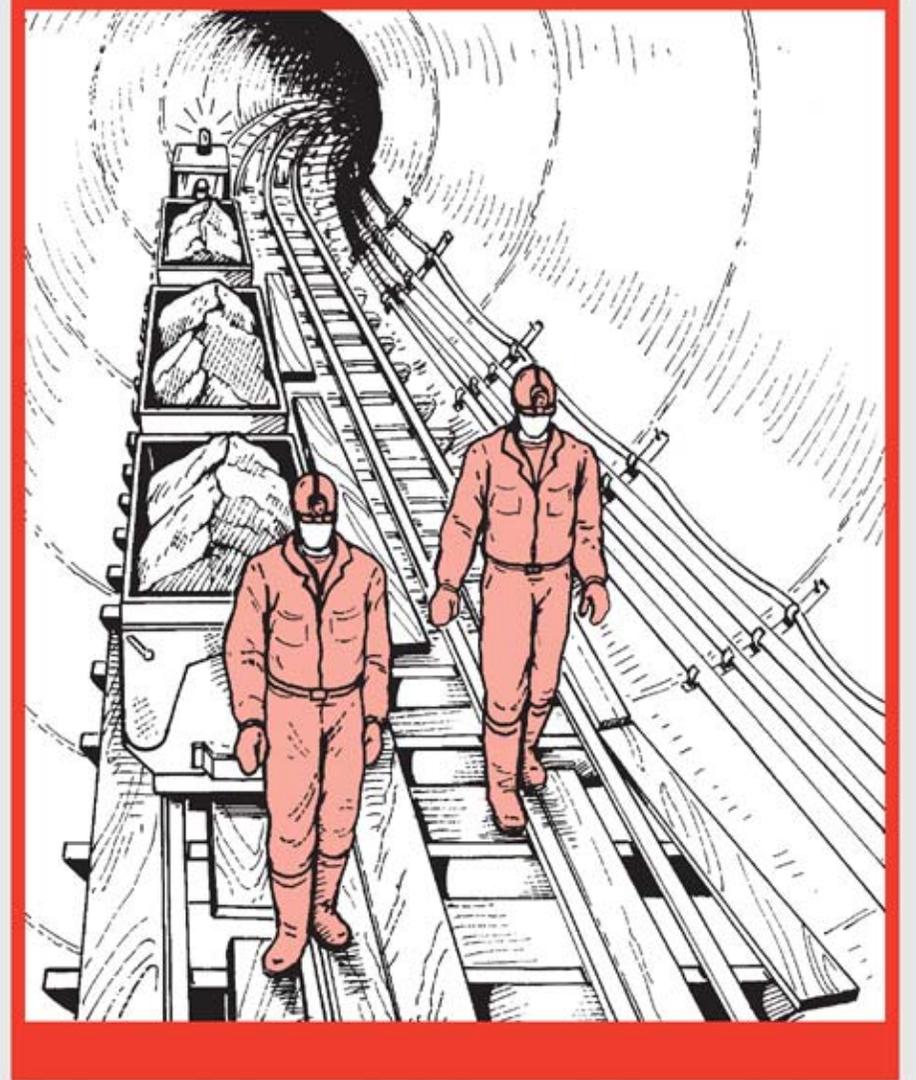


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مشايات بجانب خطوط سكك حديدية



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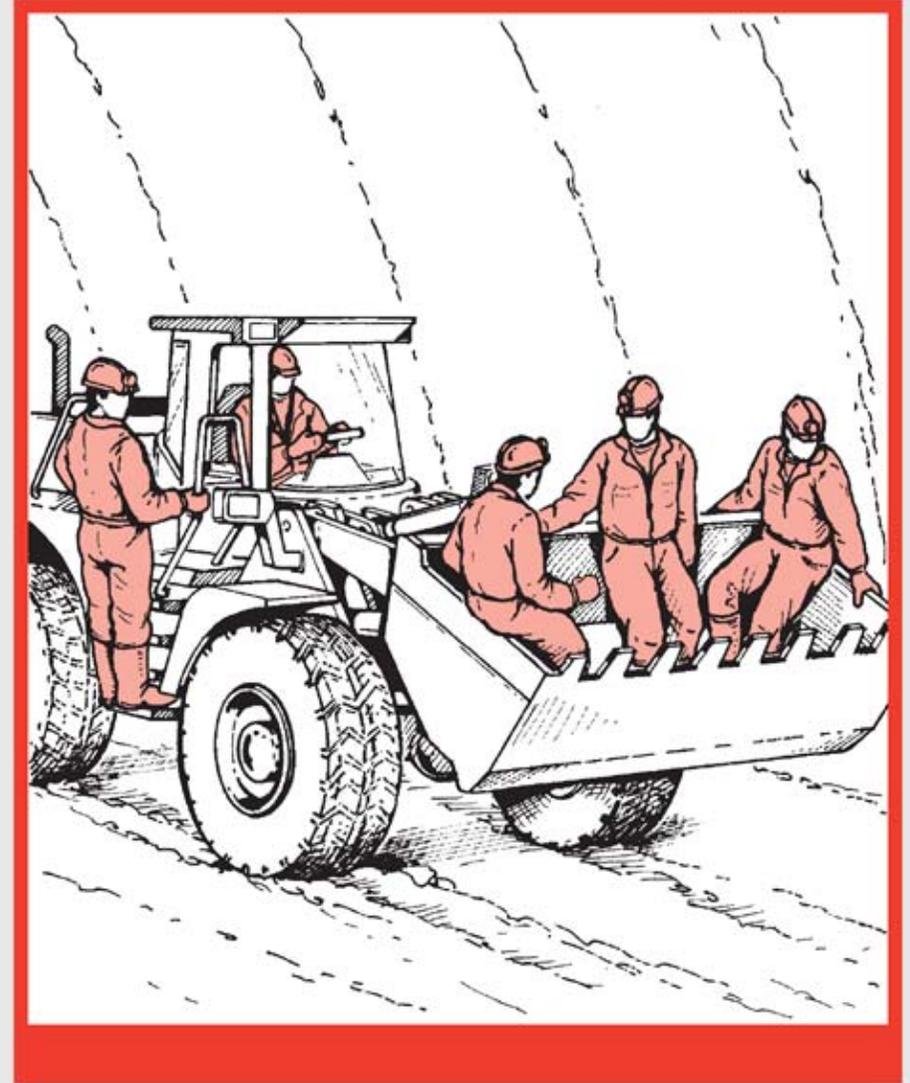
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انتقال الأفراد



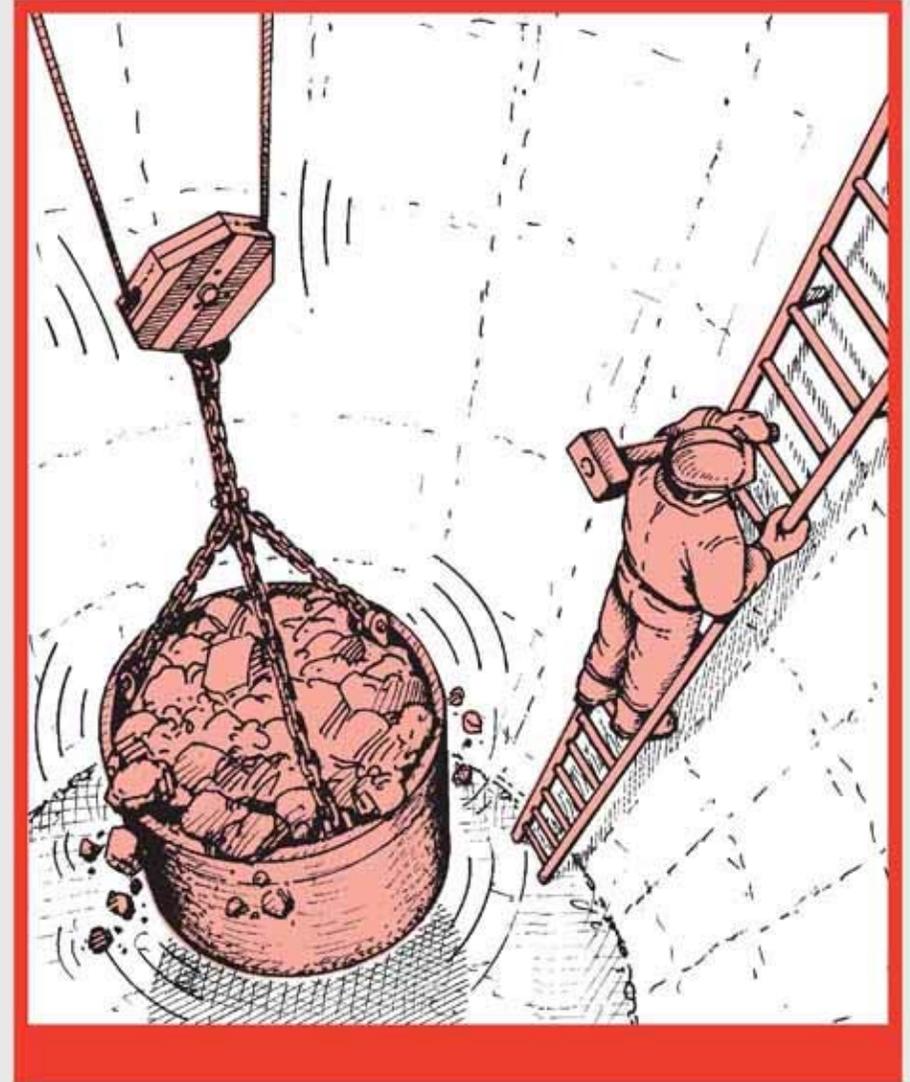
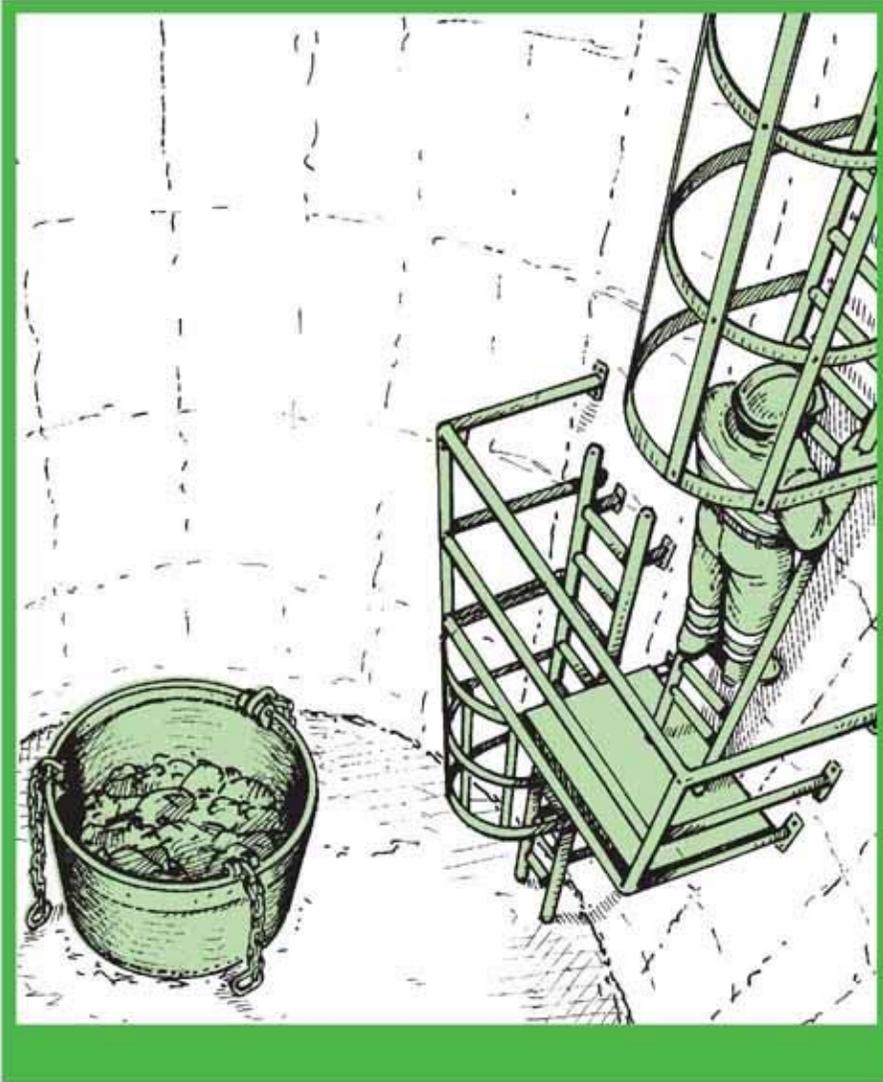
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الانتقال داخل آبار الحفر



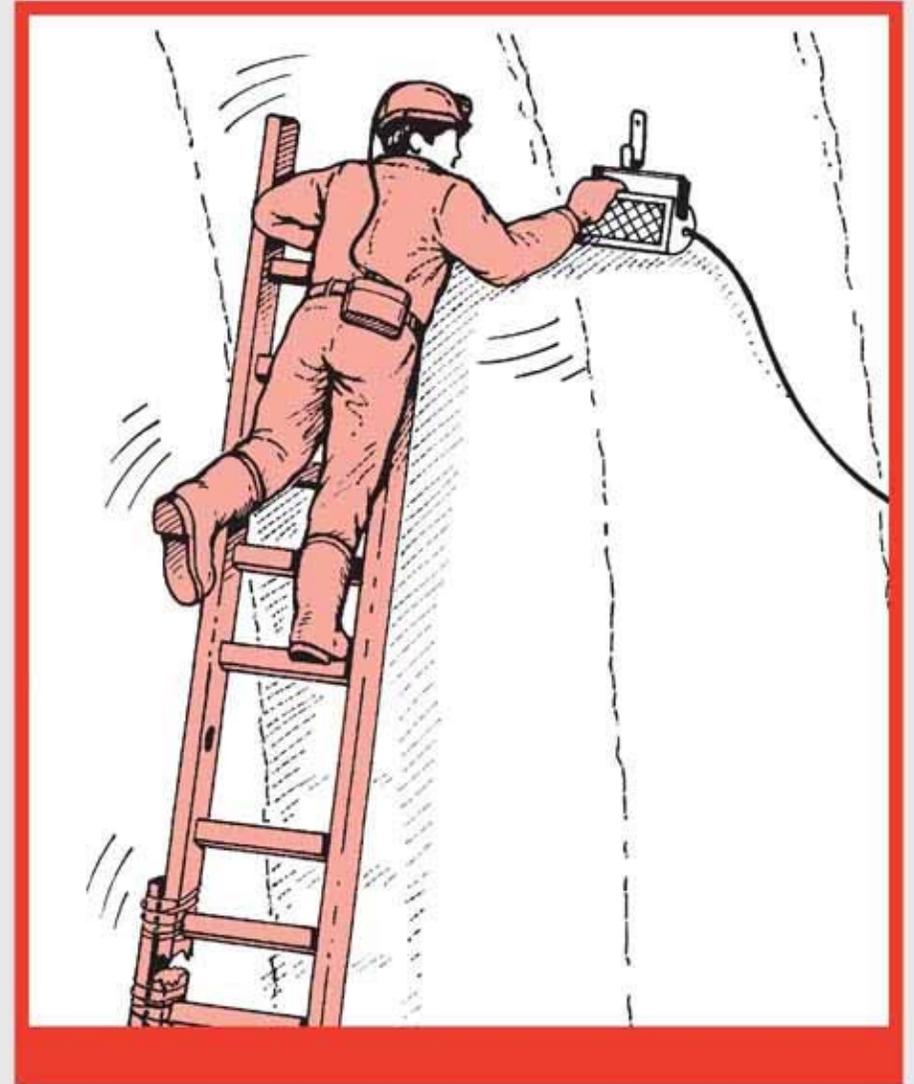
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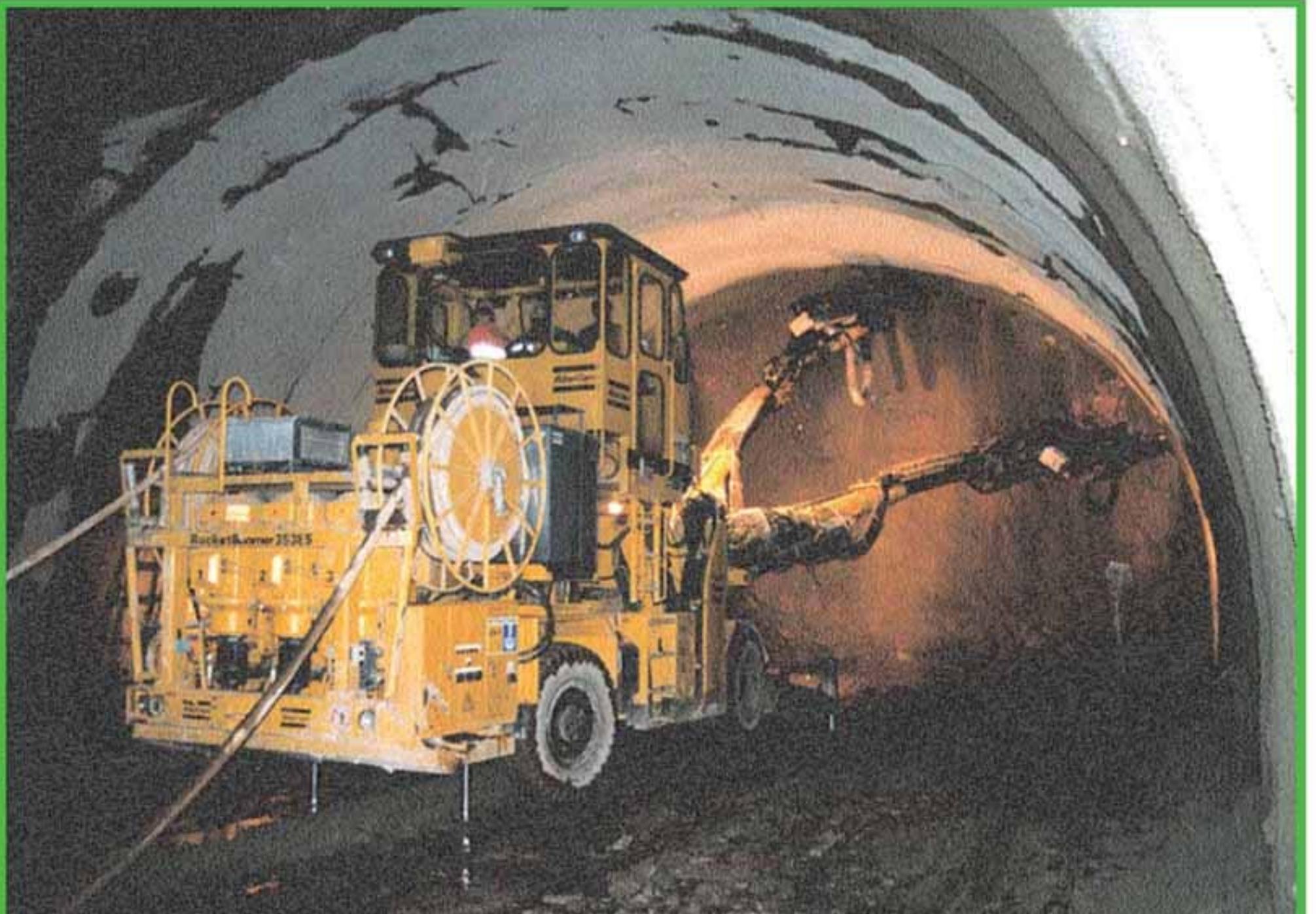
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استخدام السلالم النقالة في الانتقال



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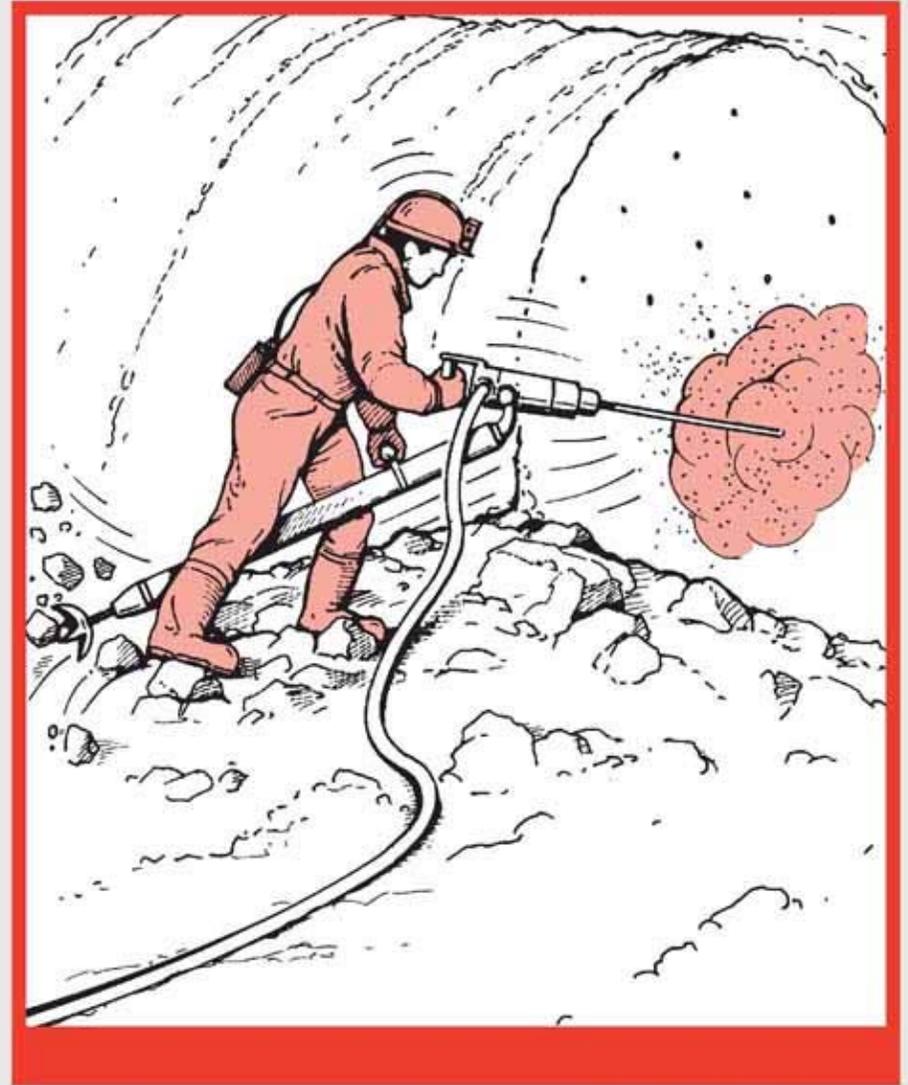


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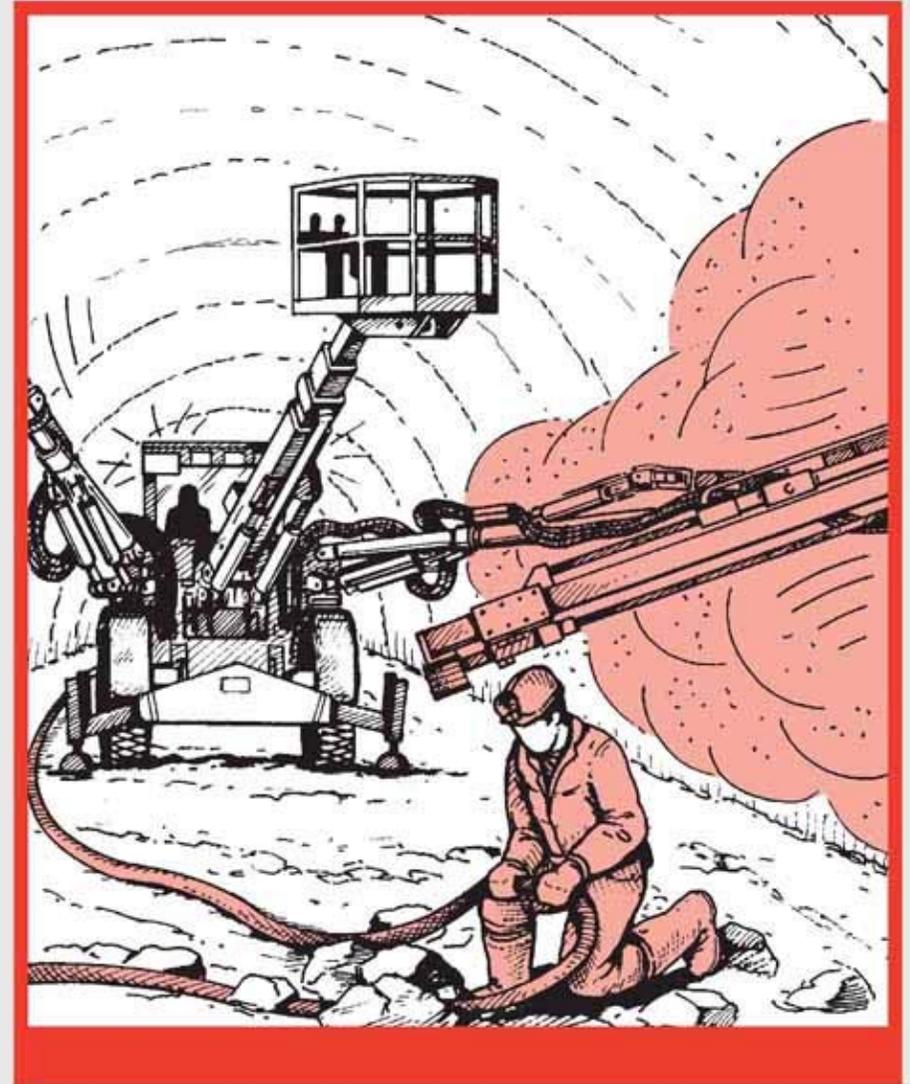
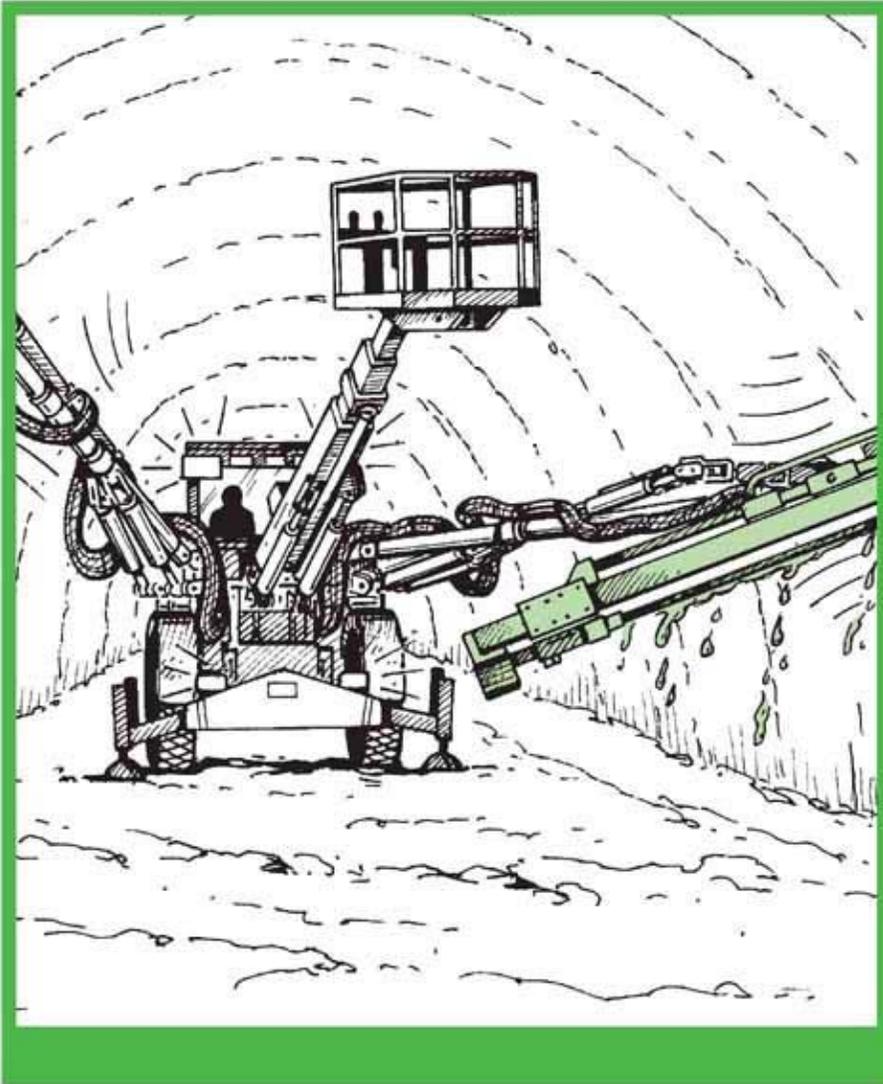
التخريم اليدوي



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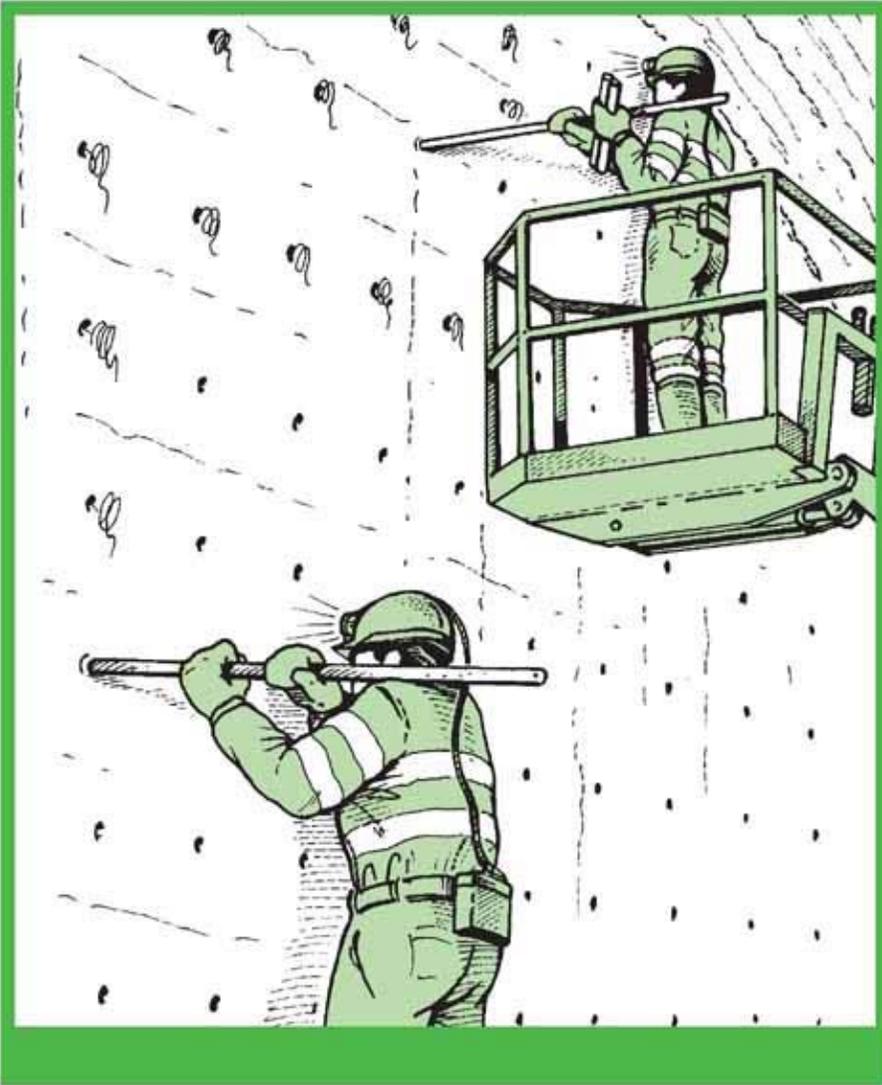


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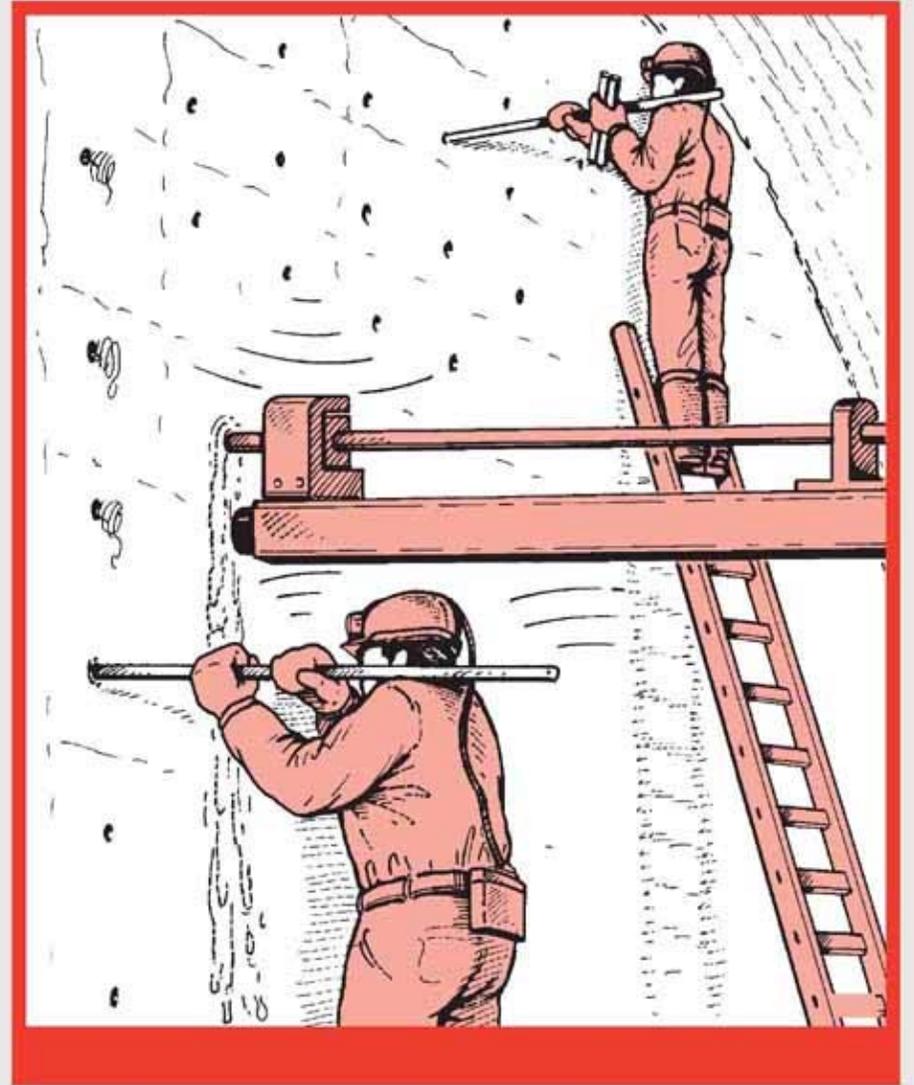
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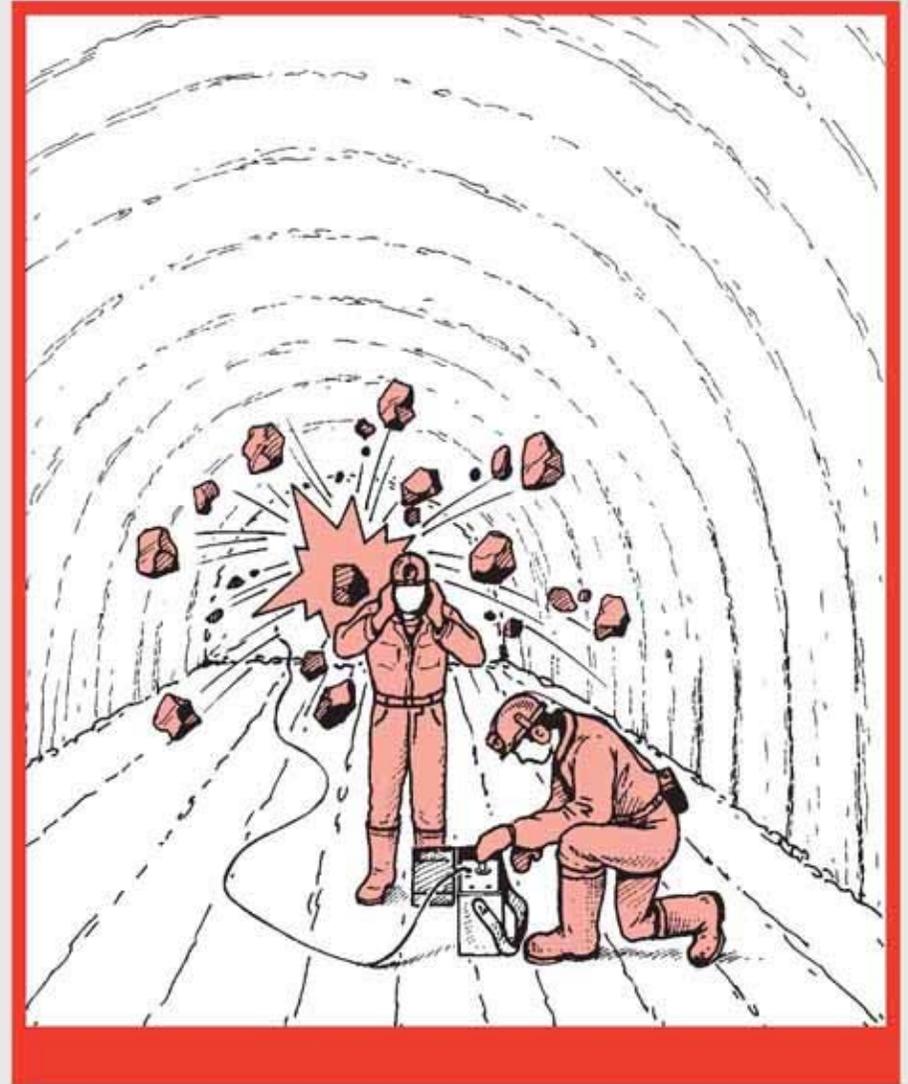
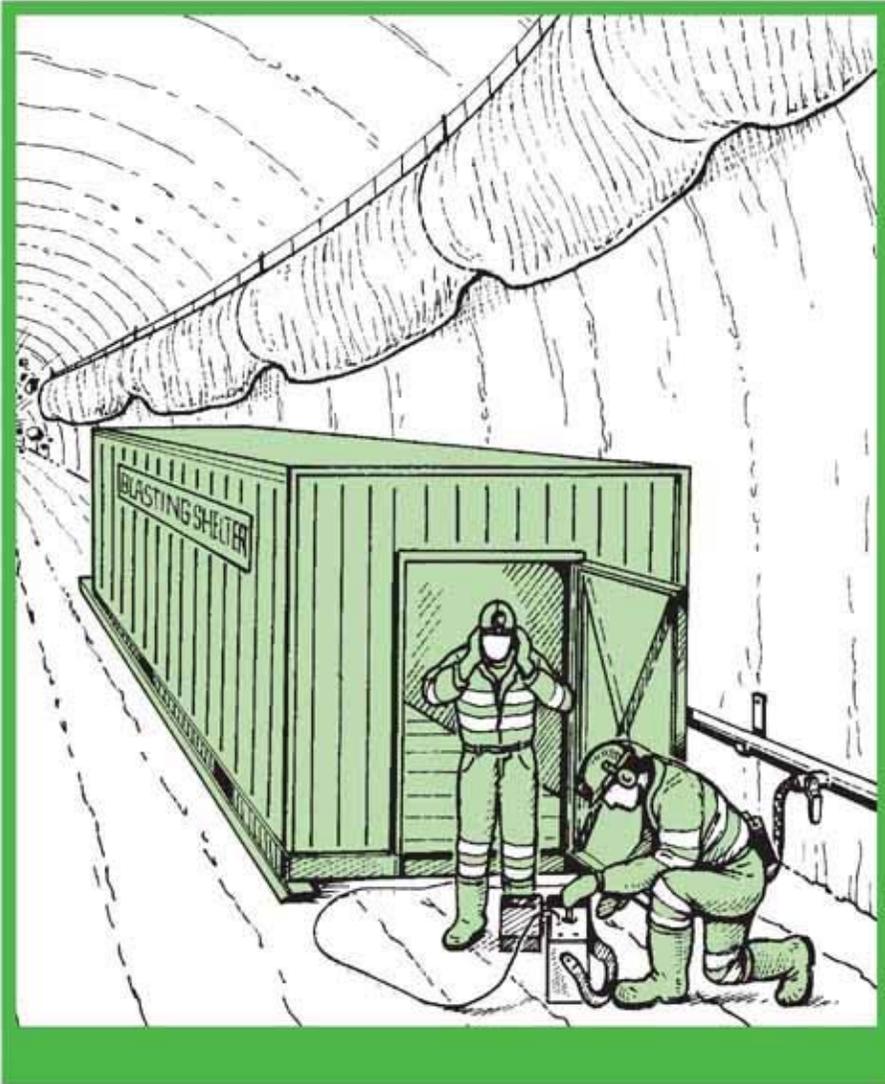
وضع المتفجرات داخل الأخرام



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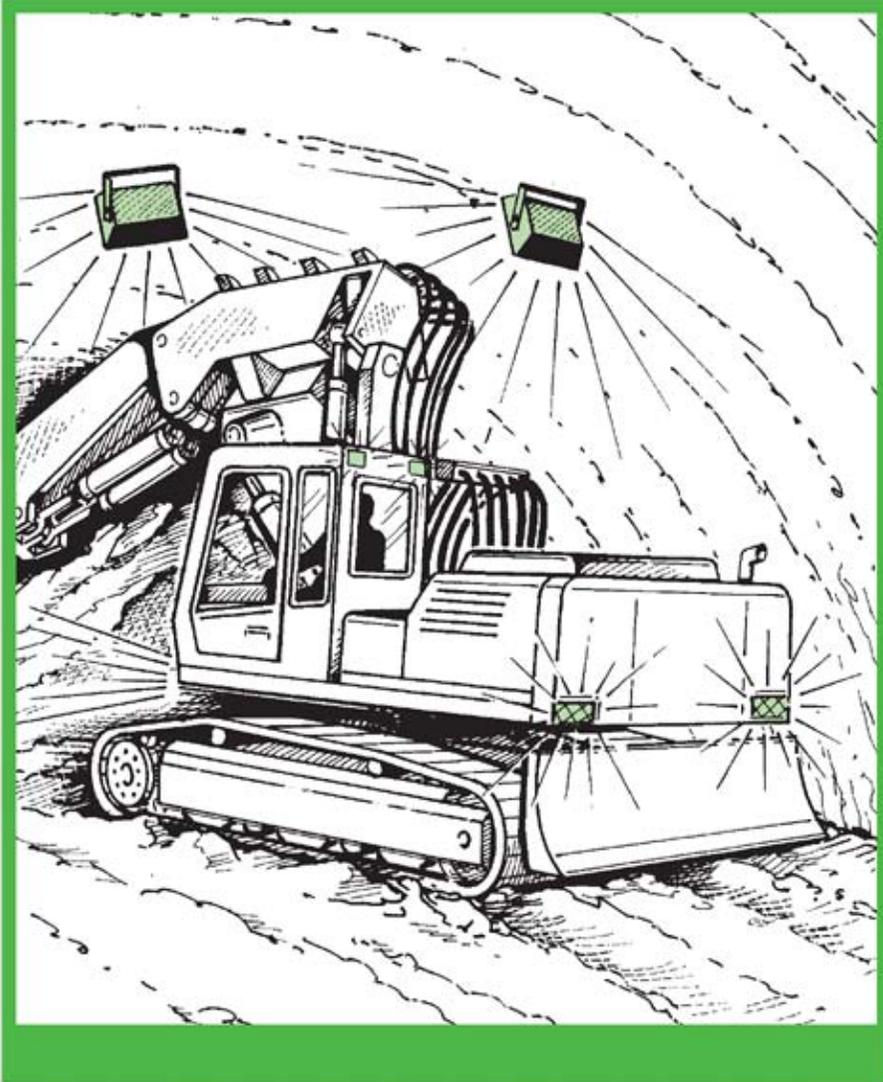


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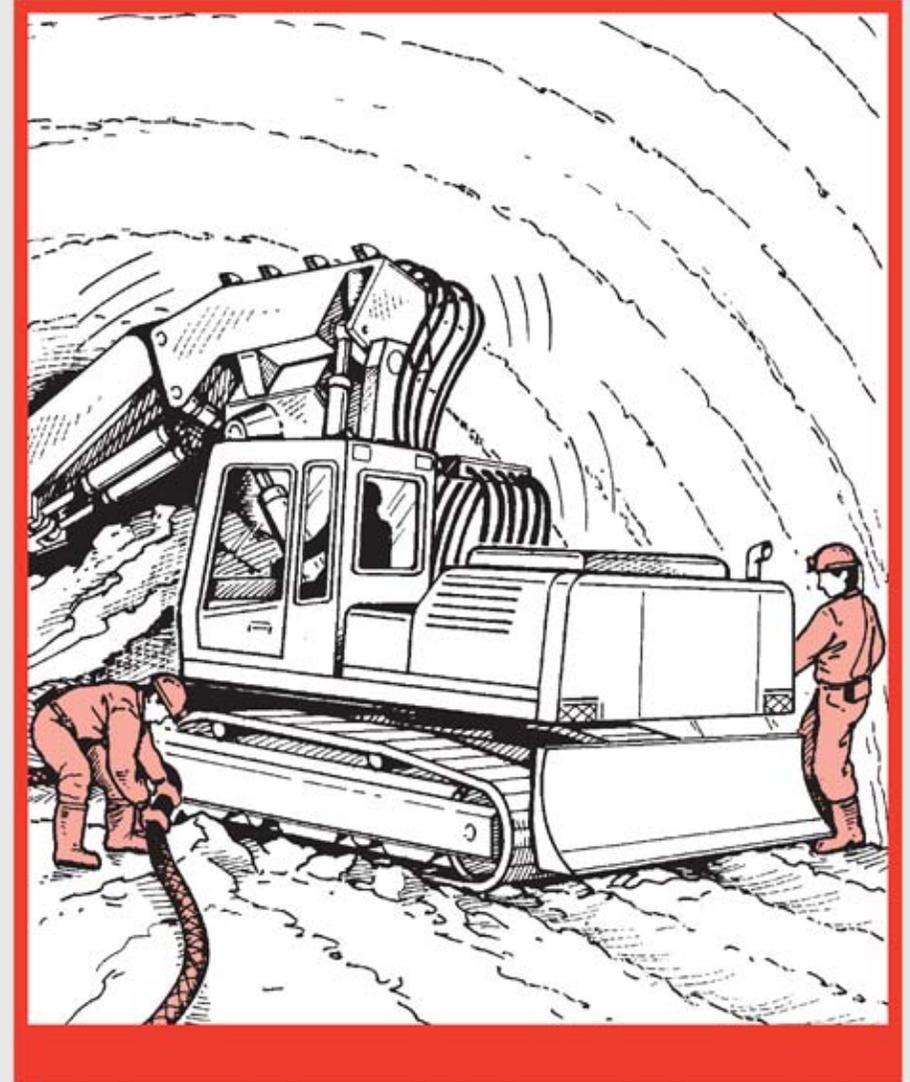
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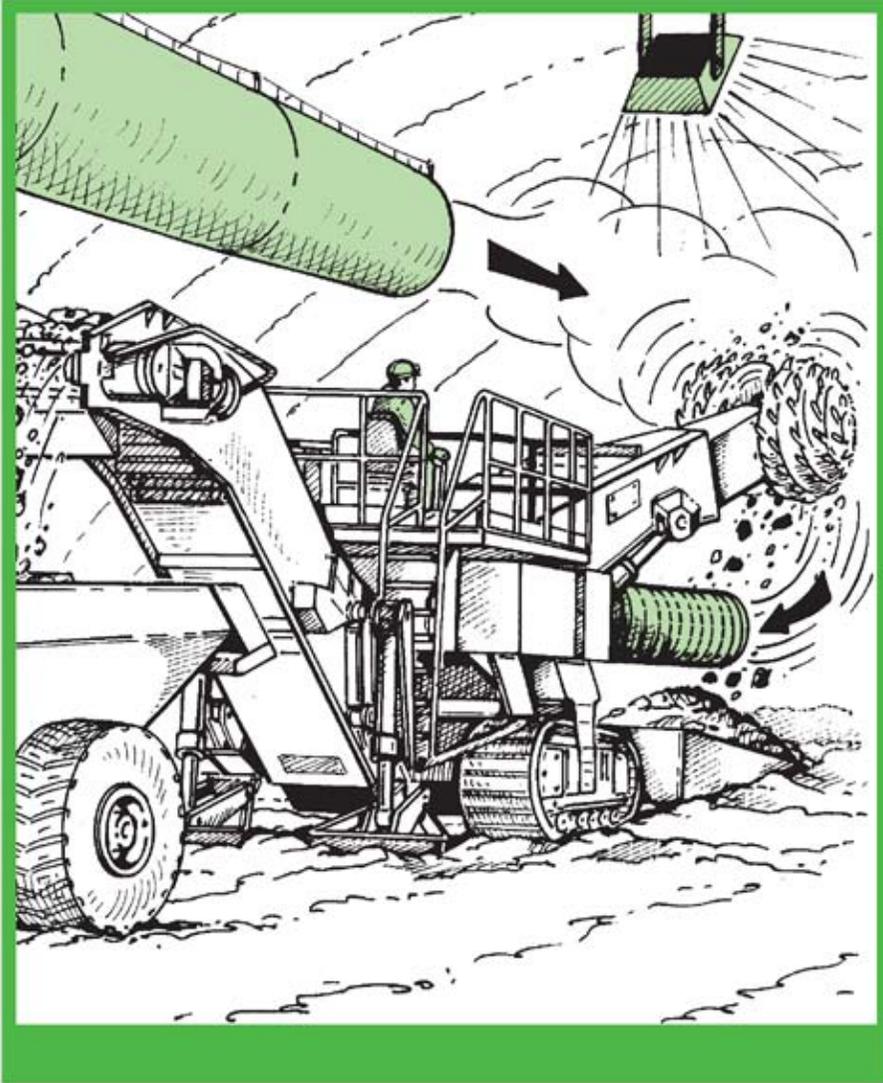
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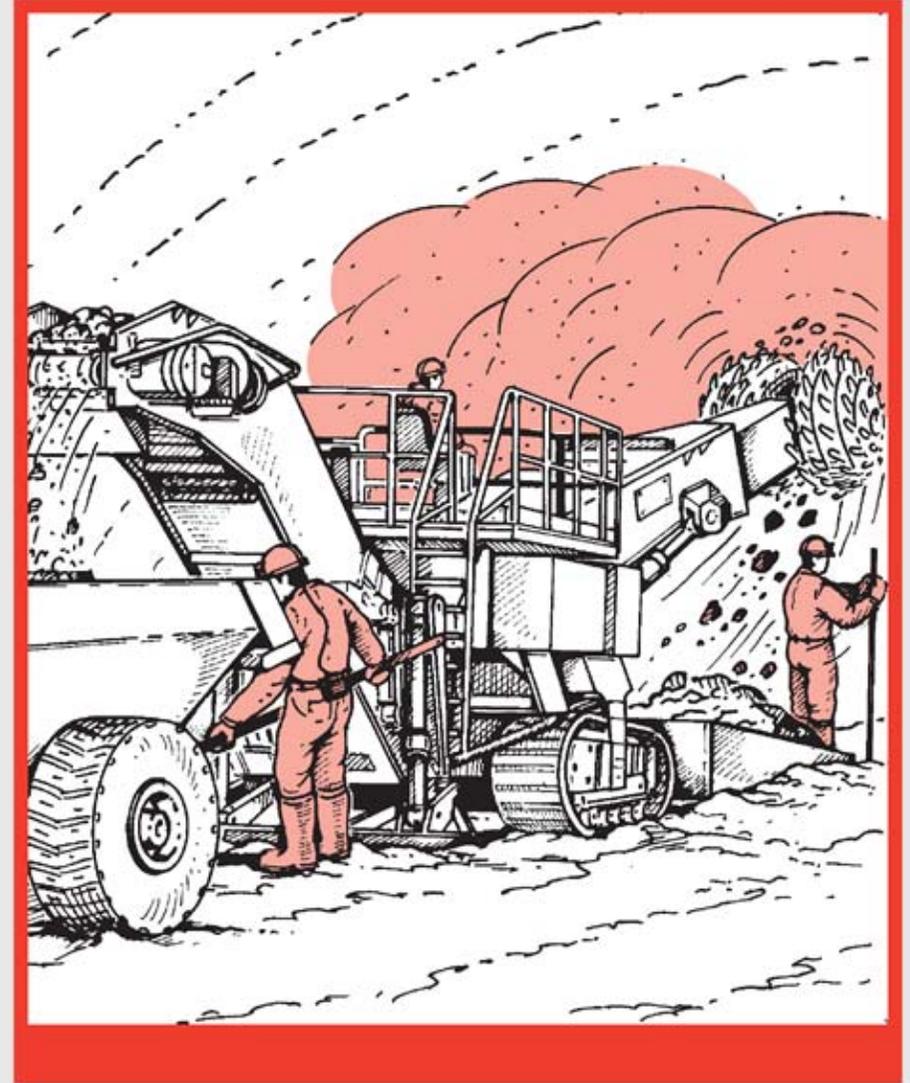
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الحفر باستخدام الحفار الأنبوبي بكسارة أمامية

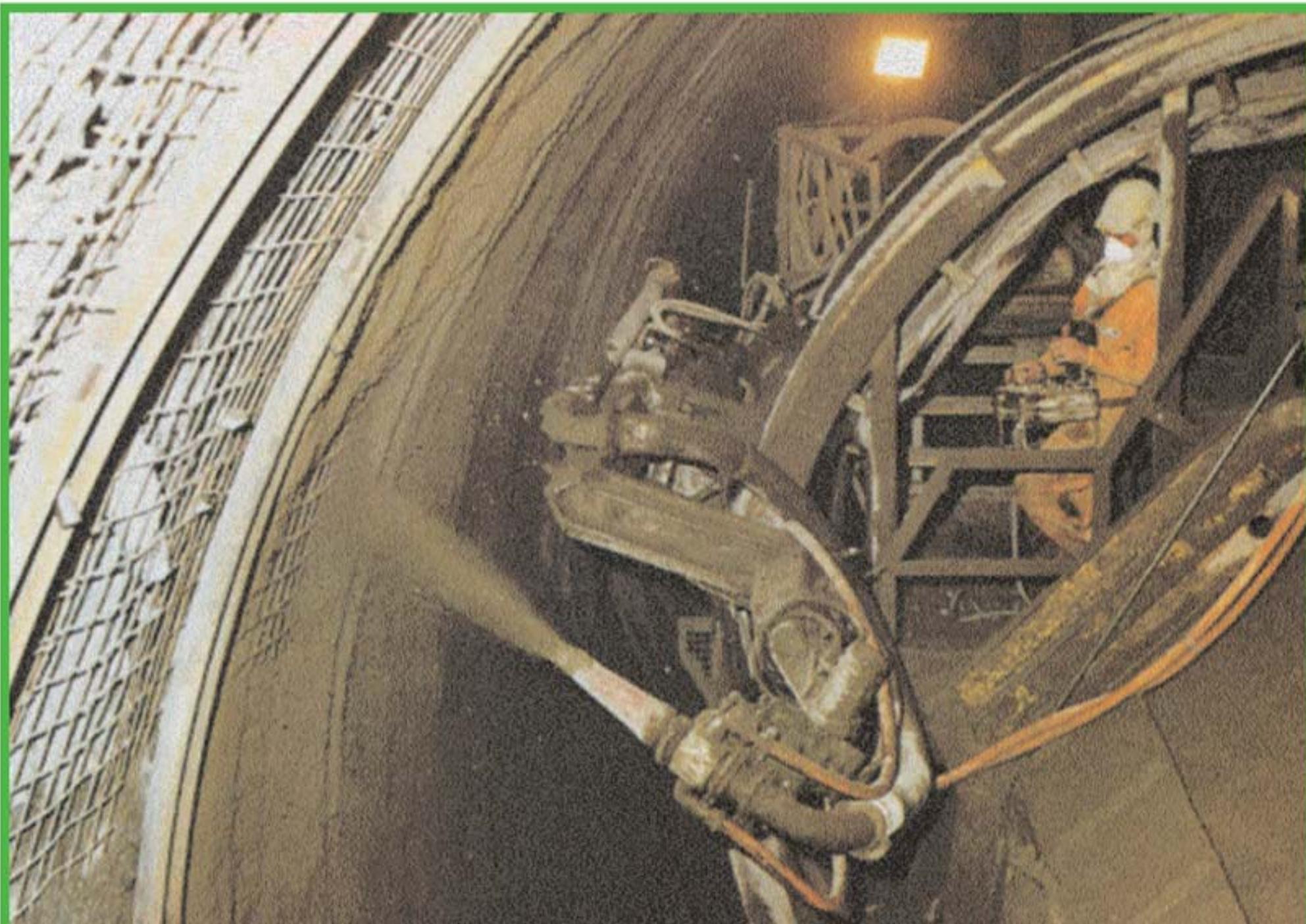


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التهديب الميكانيكى للأسطح



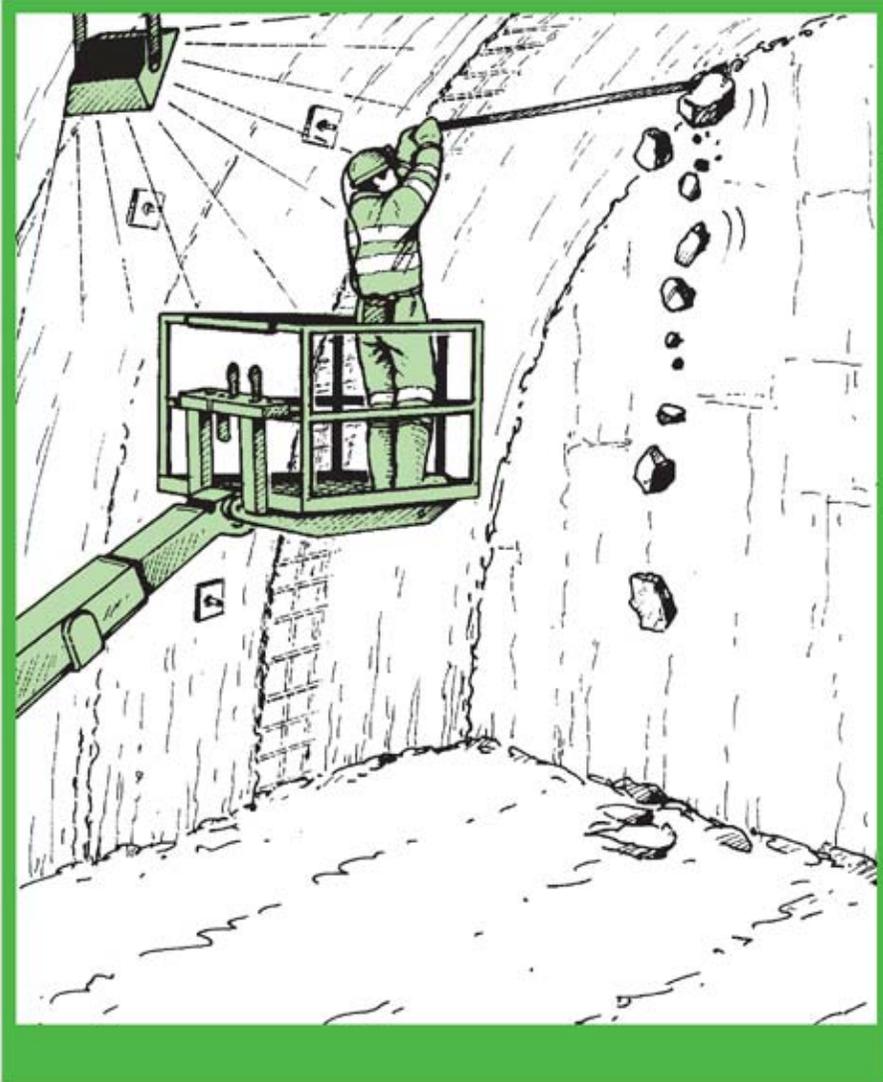
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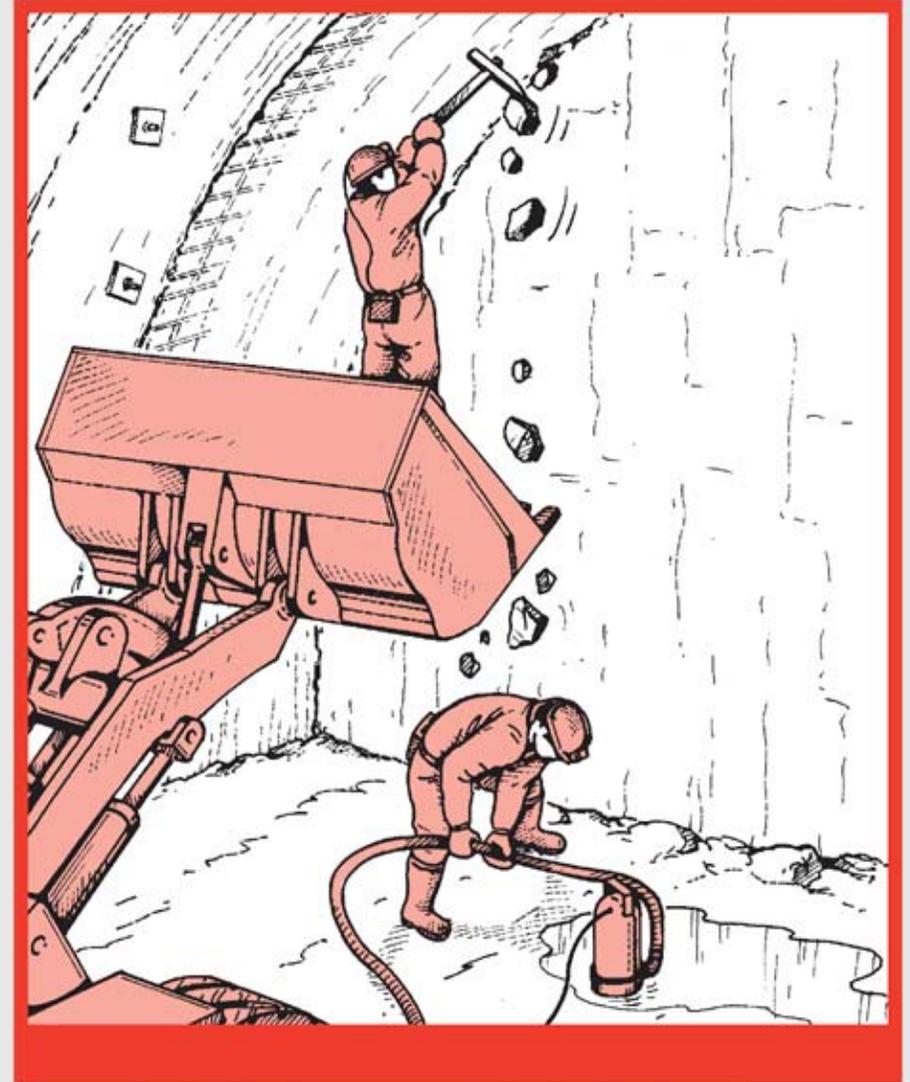
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التهديب اليدوى للأسطح



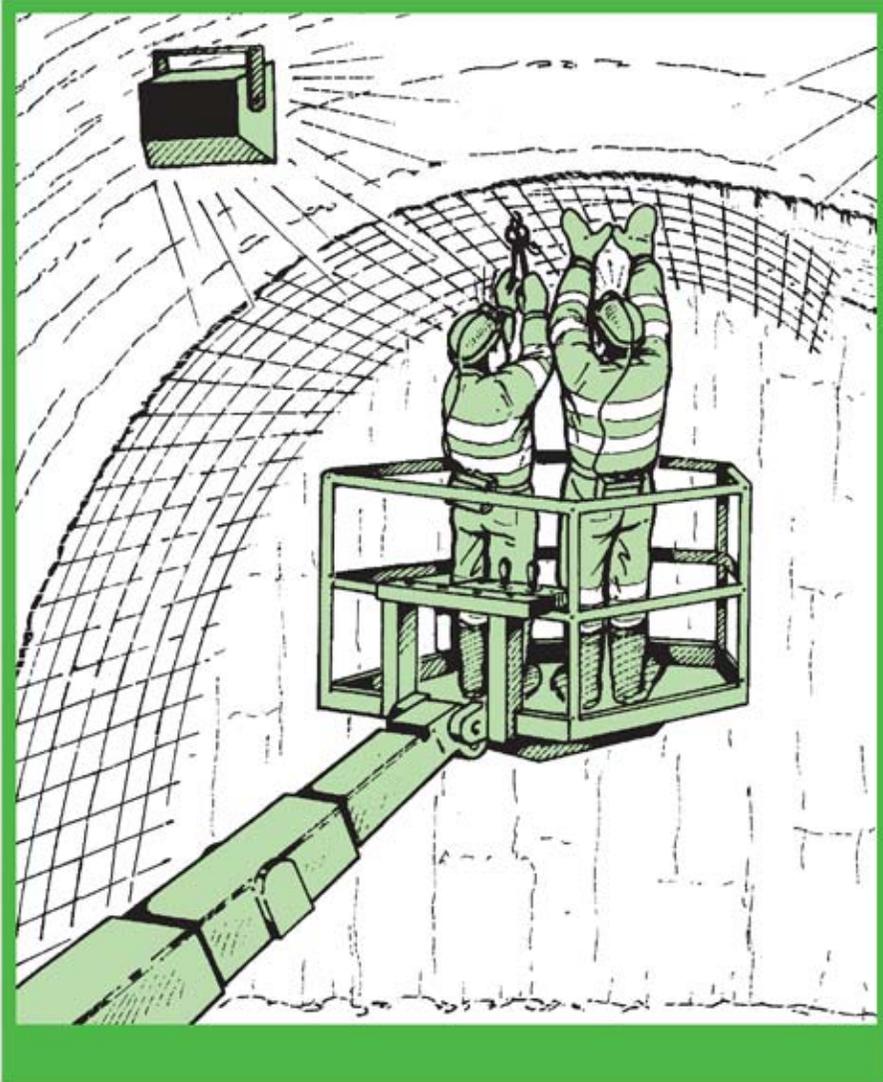
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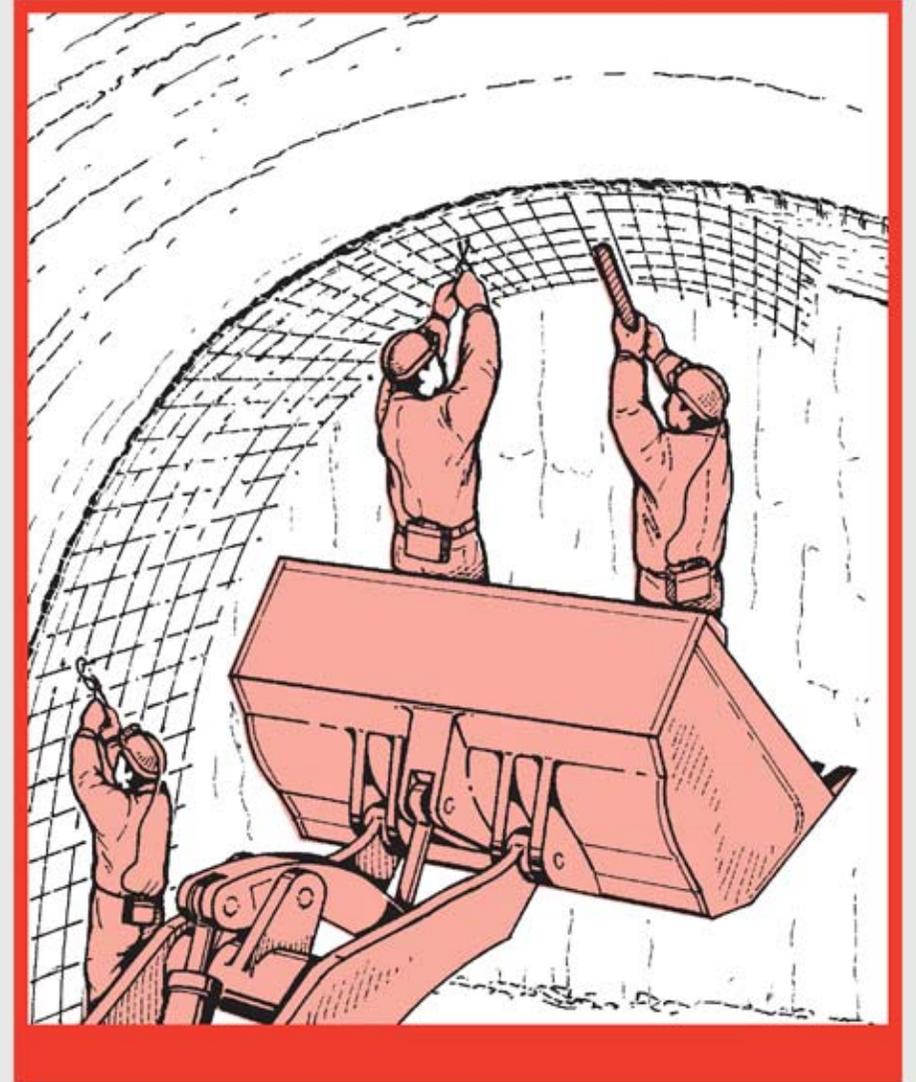
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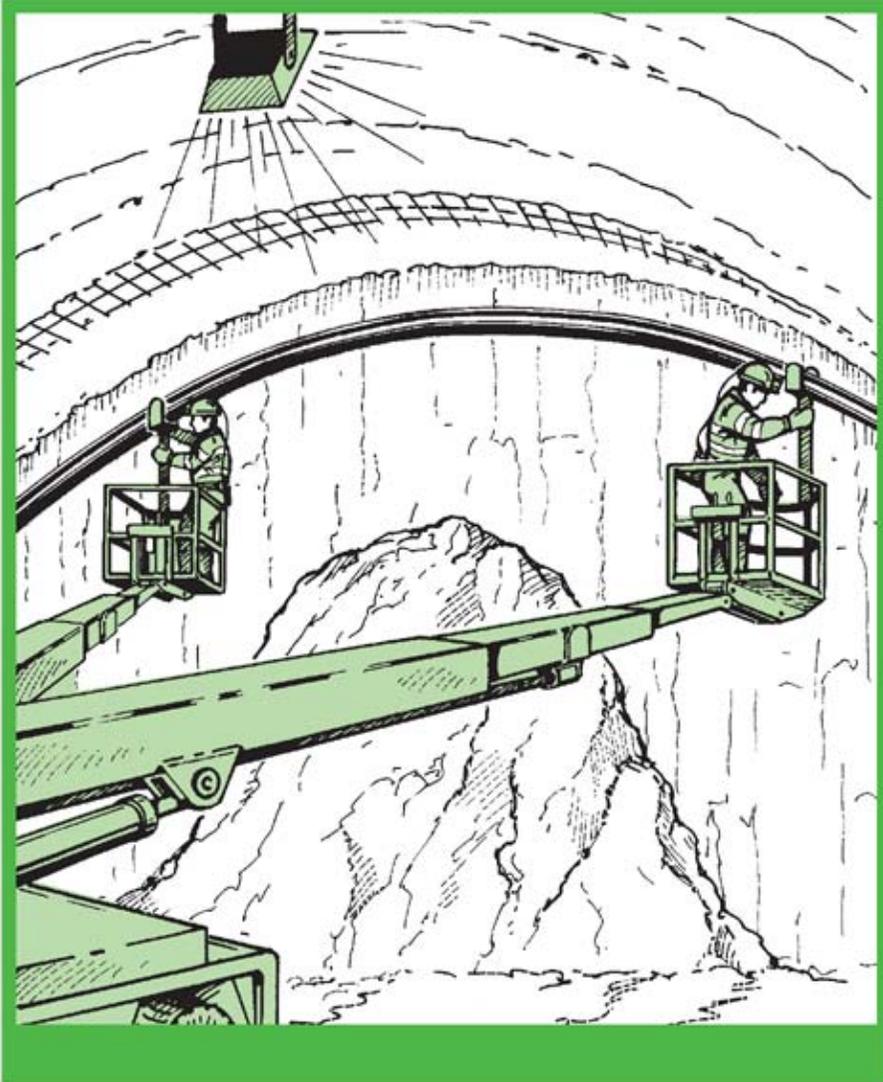
تركيب حوائط الحديد الشبكي



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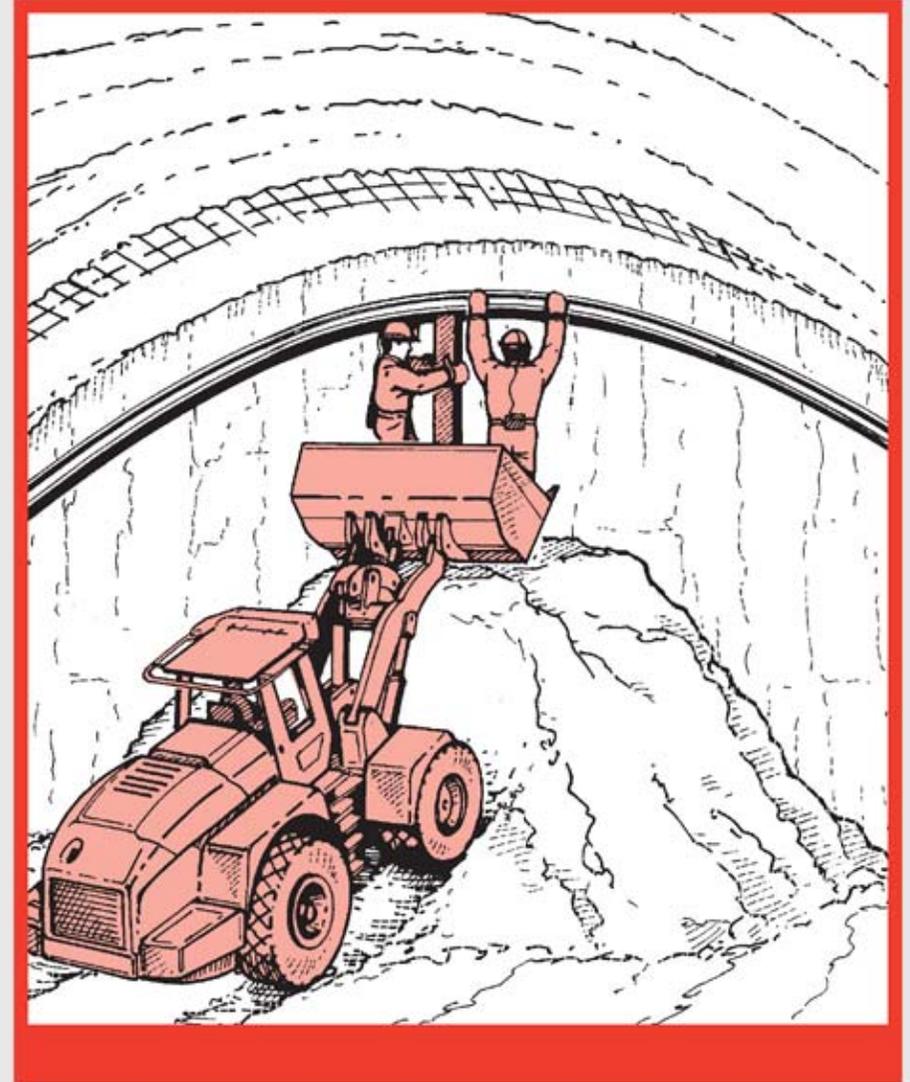


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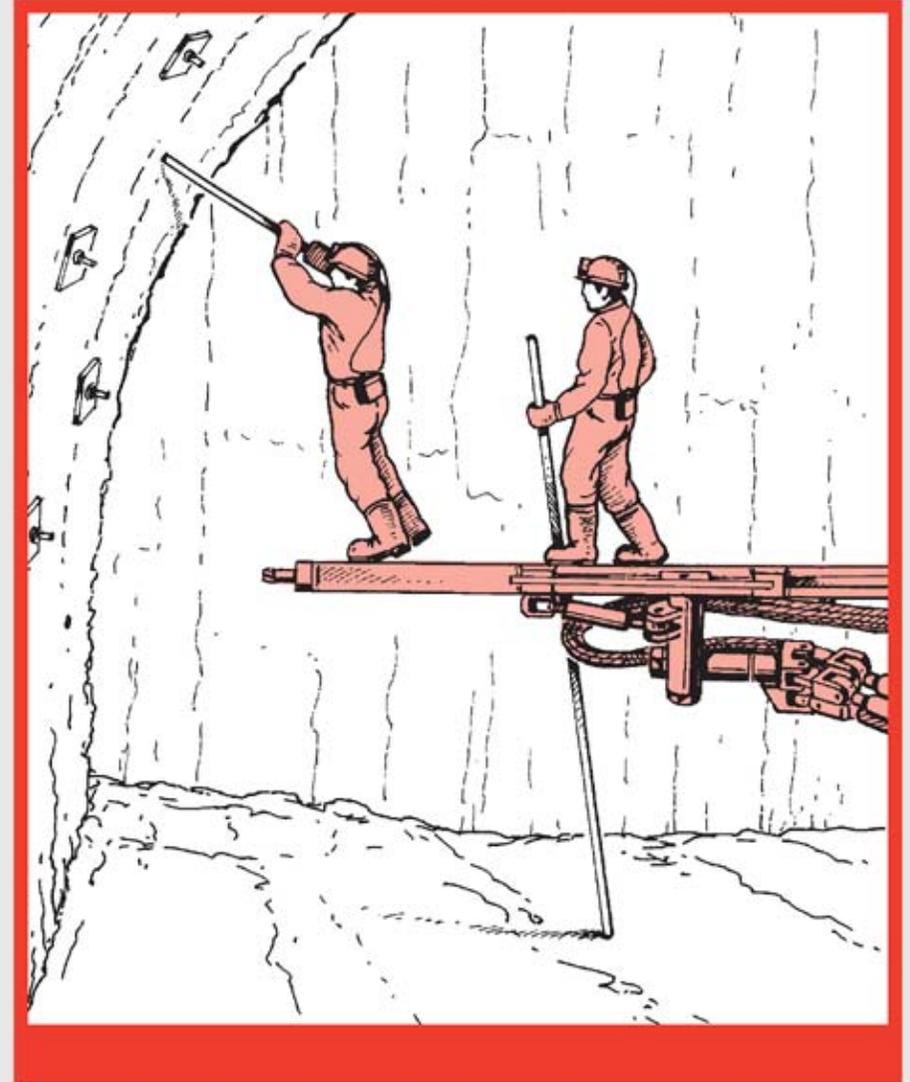
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تركيب المسامير داخل طبقات الصخر



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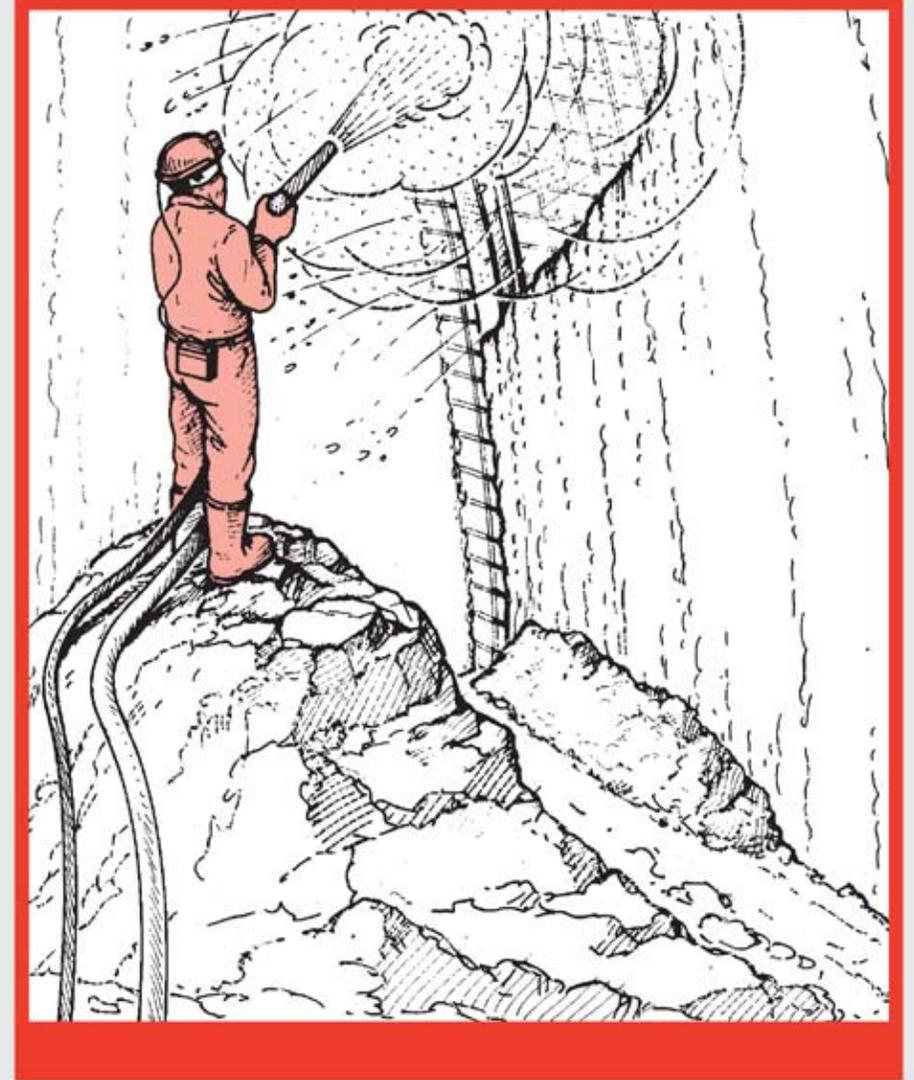
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استخدام المونة الأسمنتية المقذوفة



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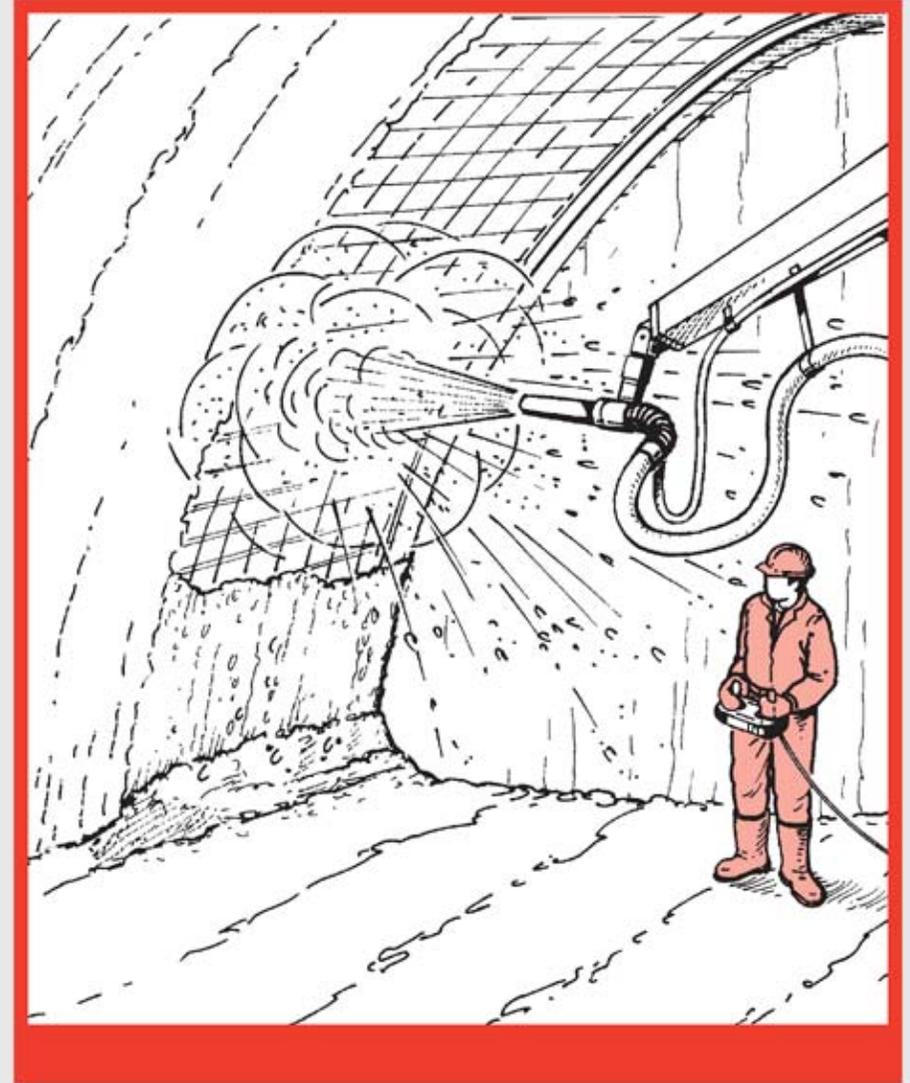
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تشغيل الرشاش الميكانيكى عن بعد



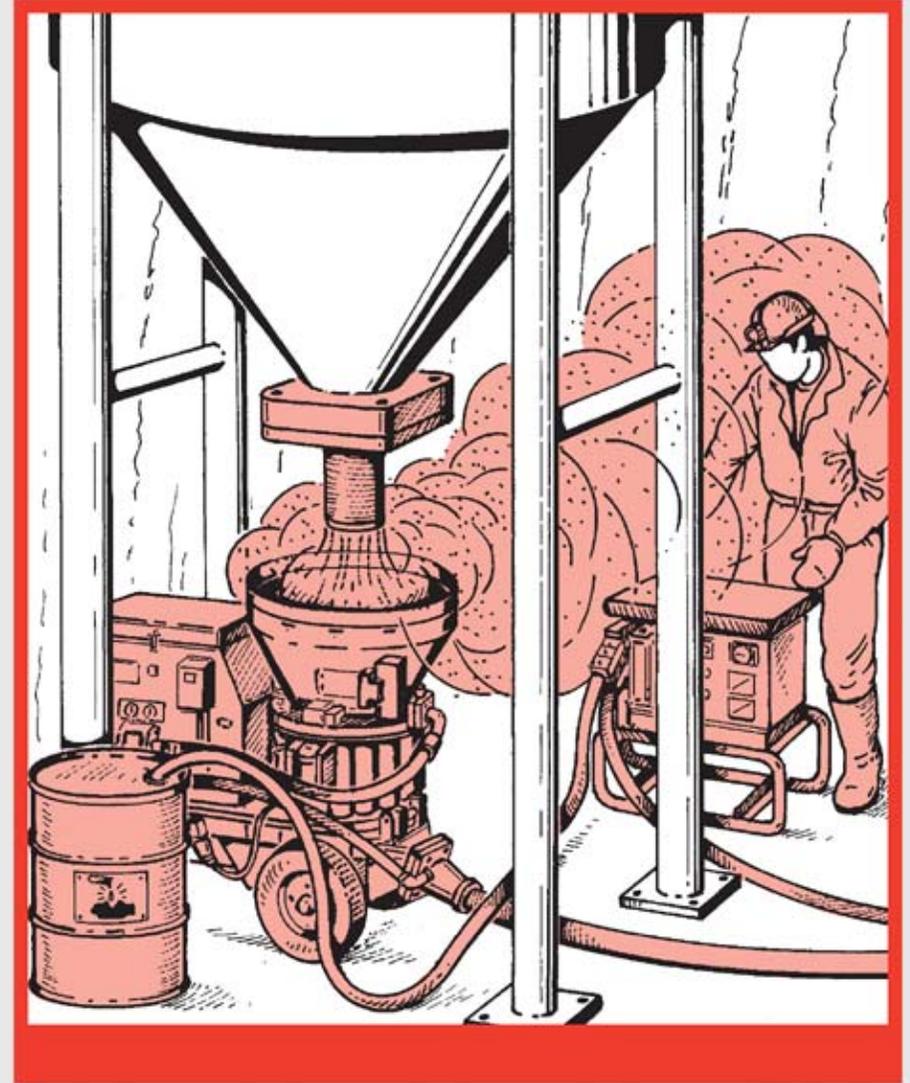
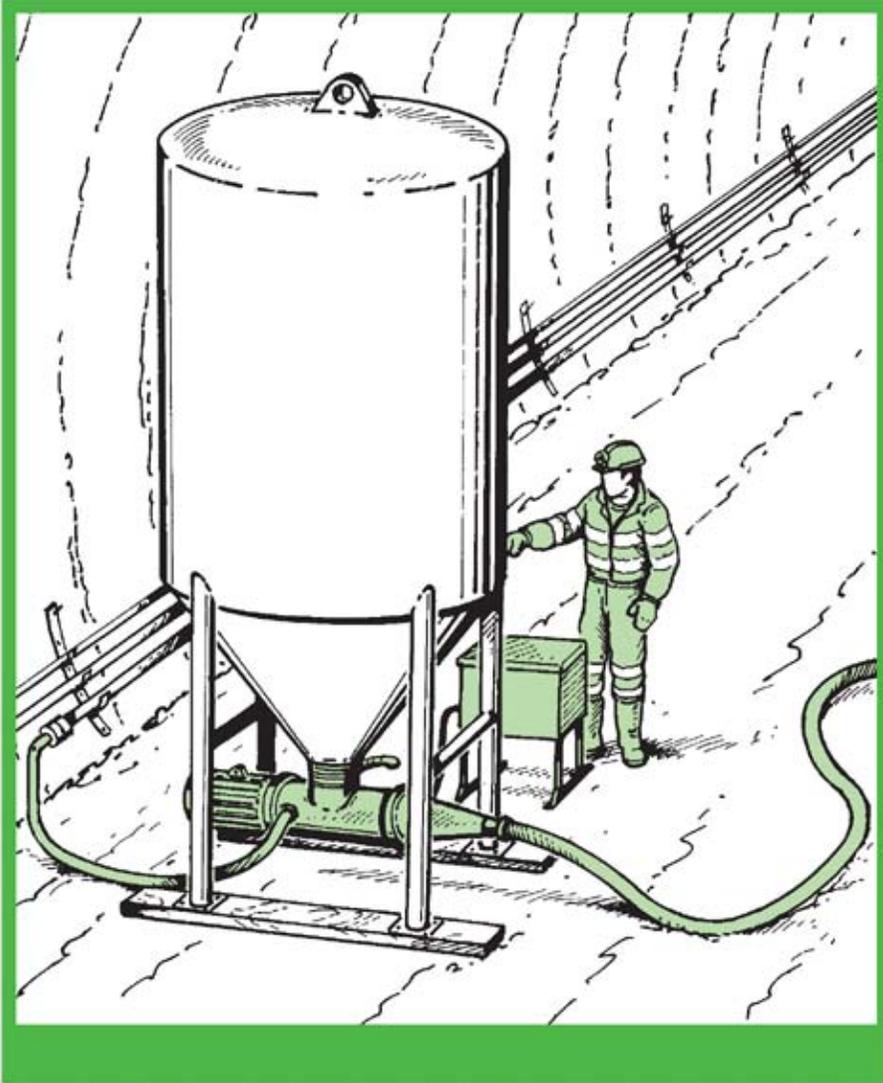
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٥,٨ استخدام المونة الأسمنتية المقدوفة (الجافة)



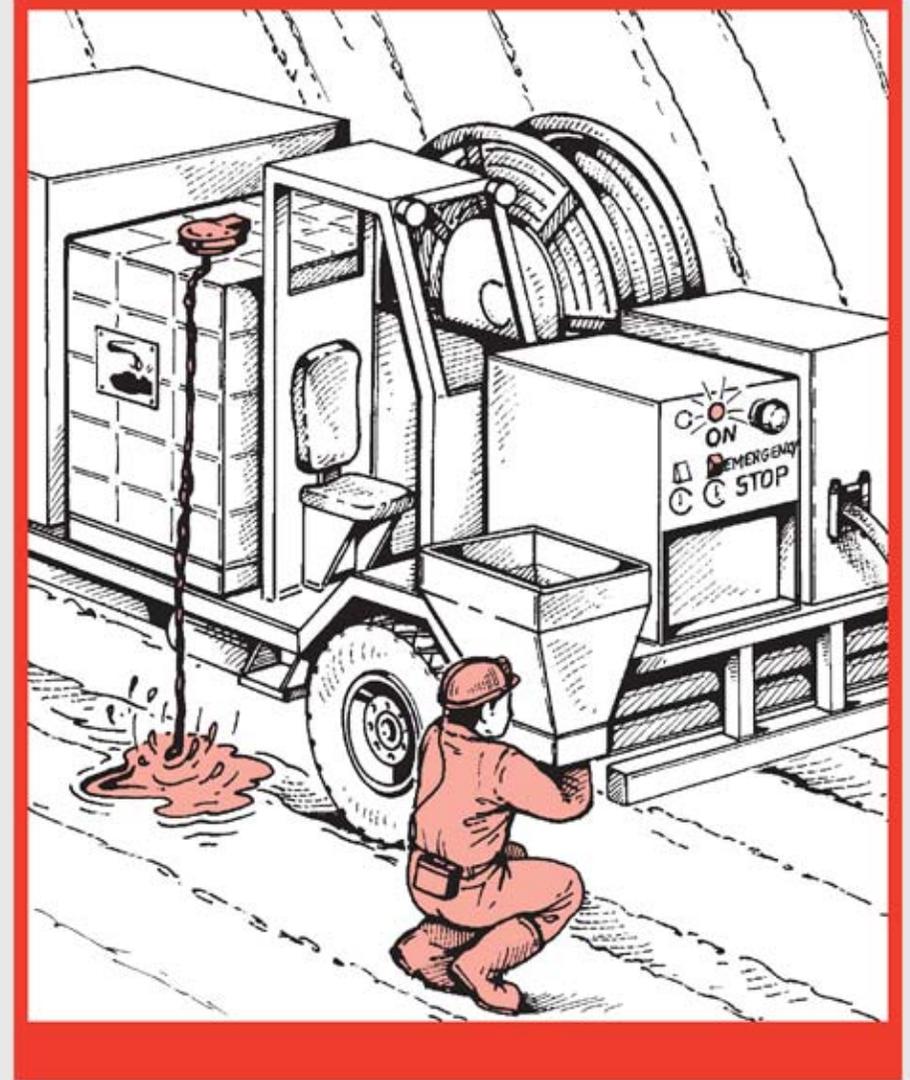
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صيانة محطة خلط ومعدات المونة الأسمنتية المقدوفة



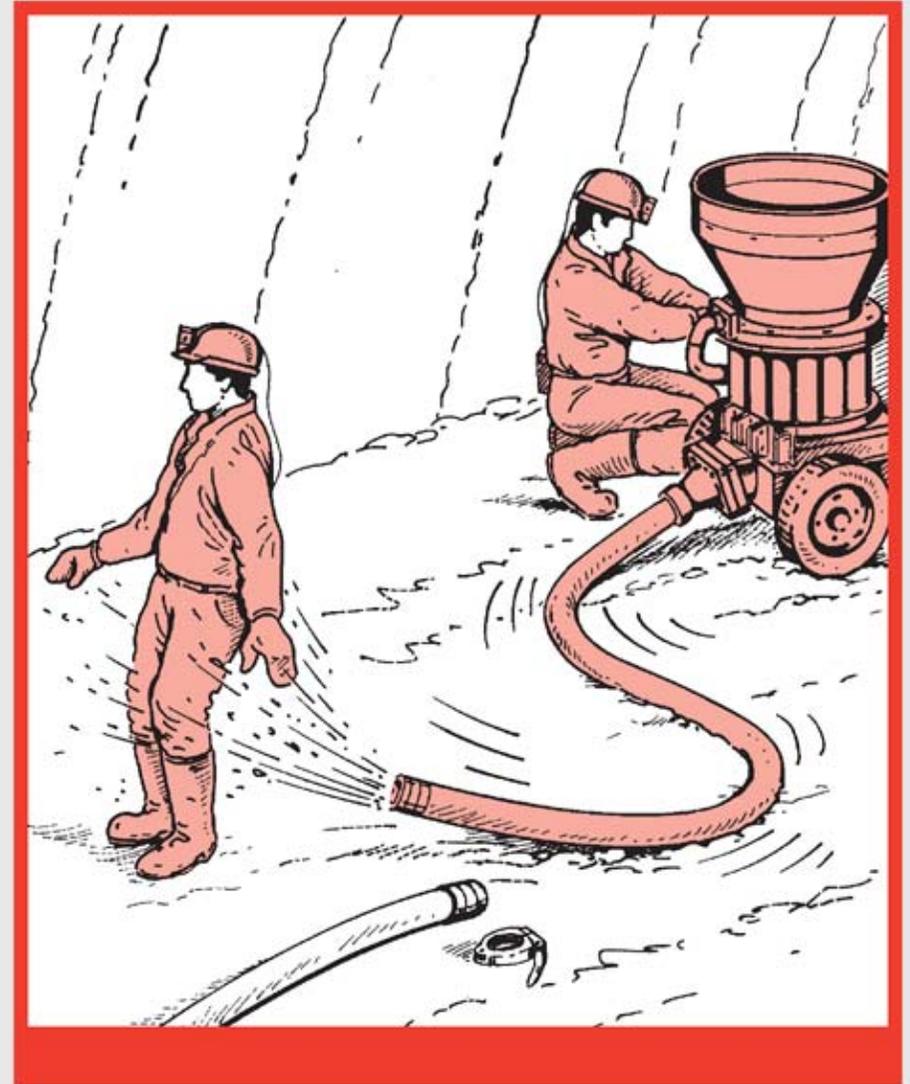
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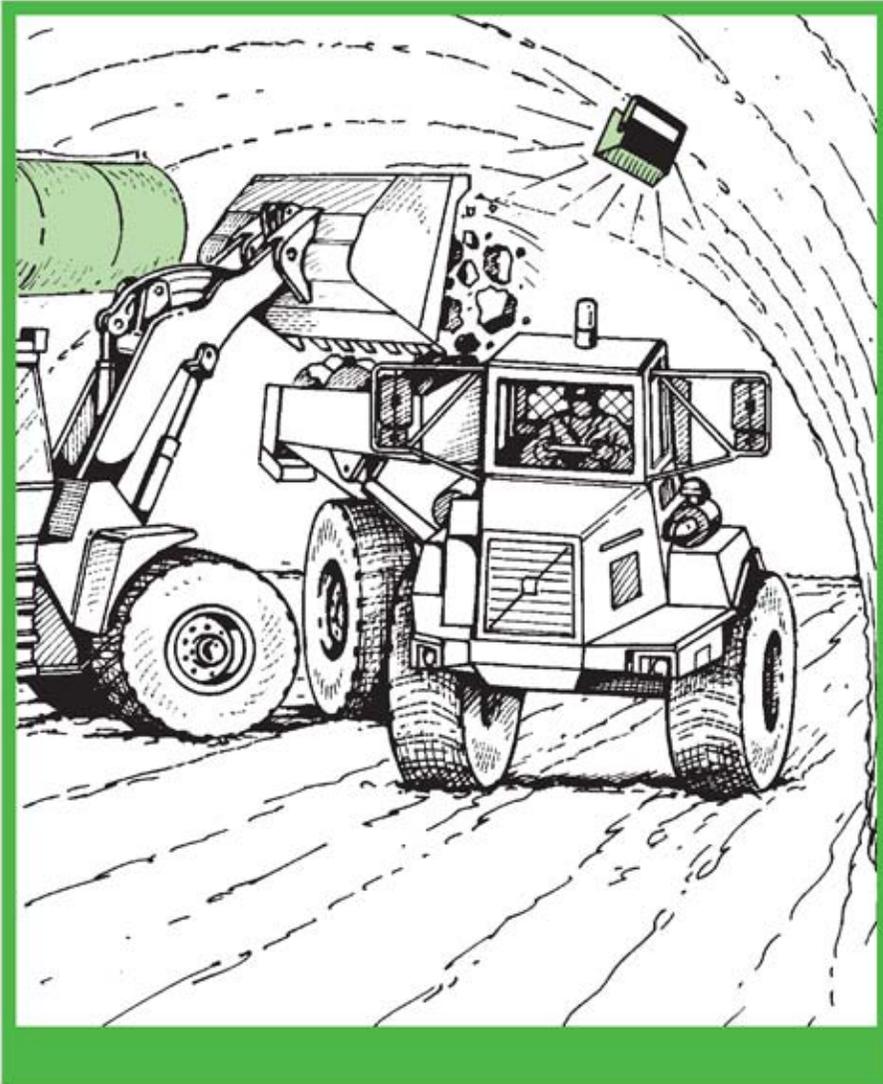


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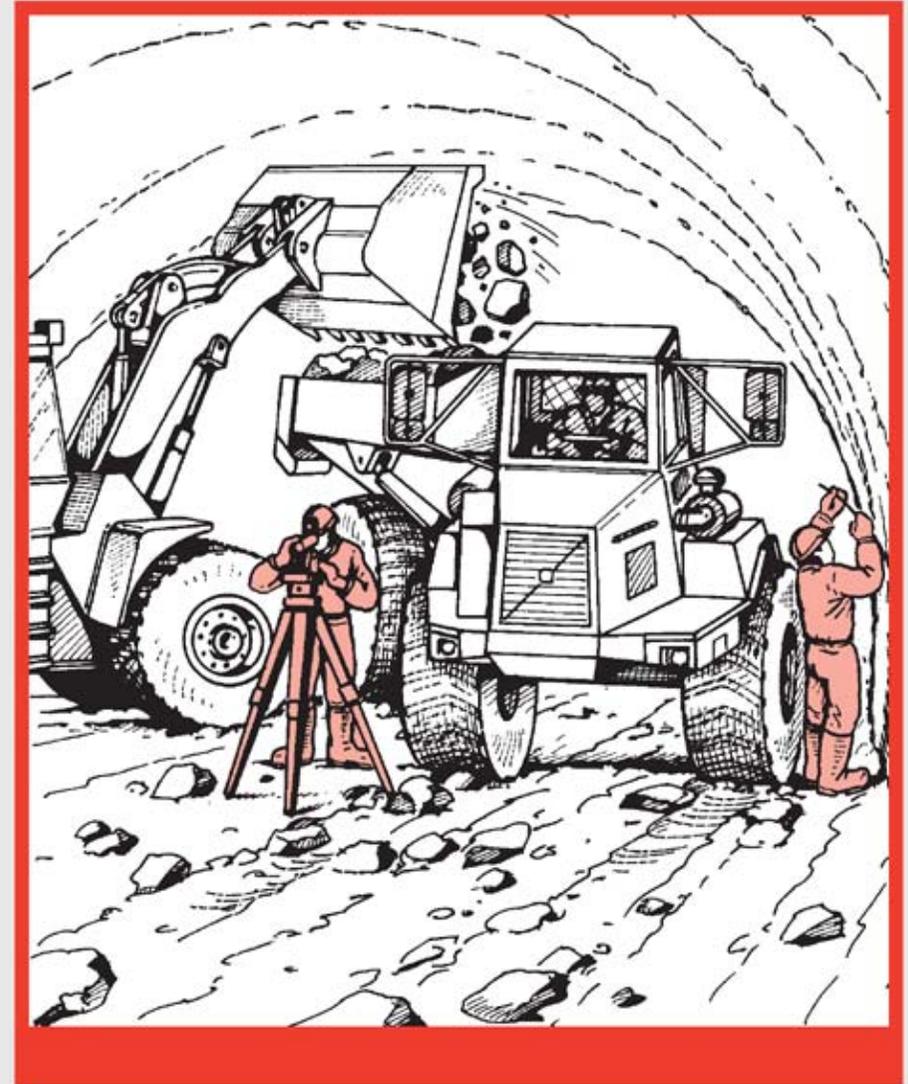
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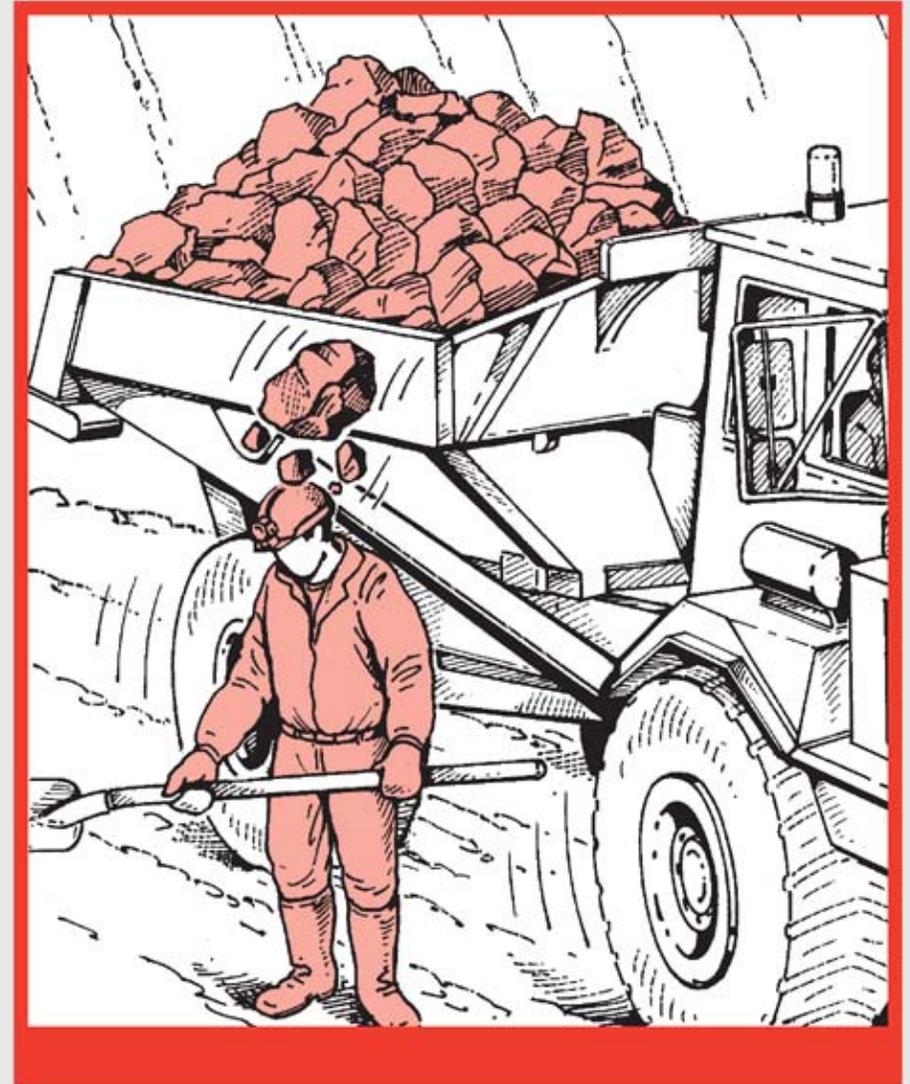


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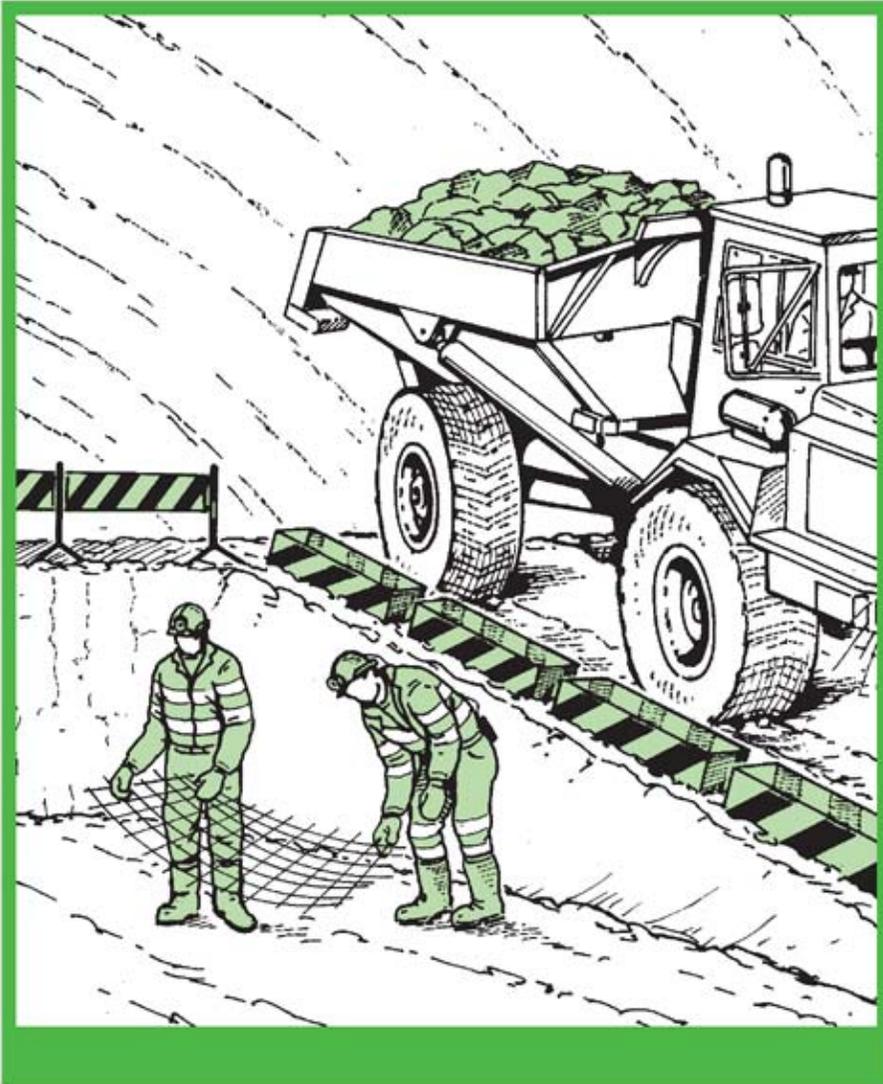


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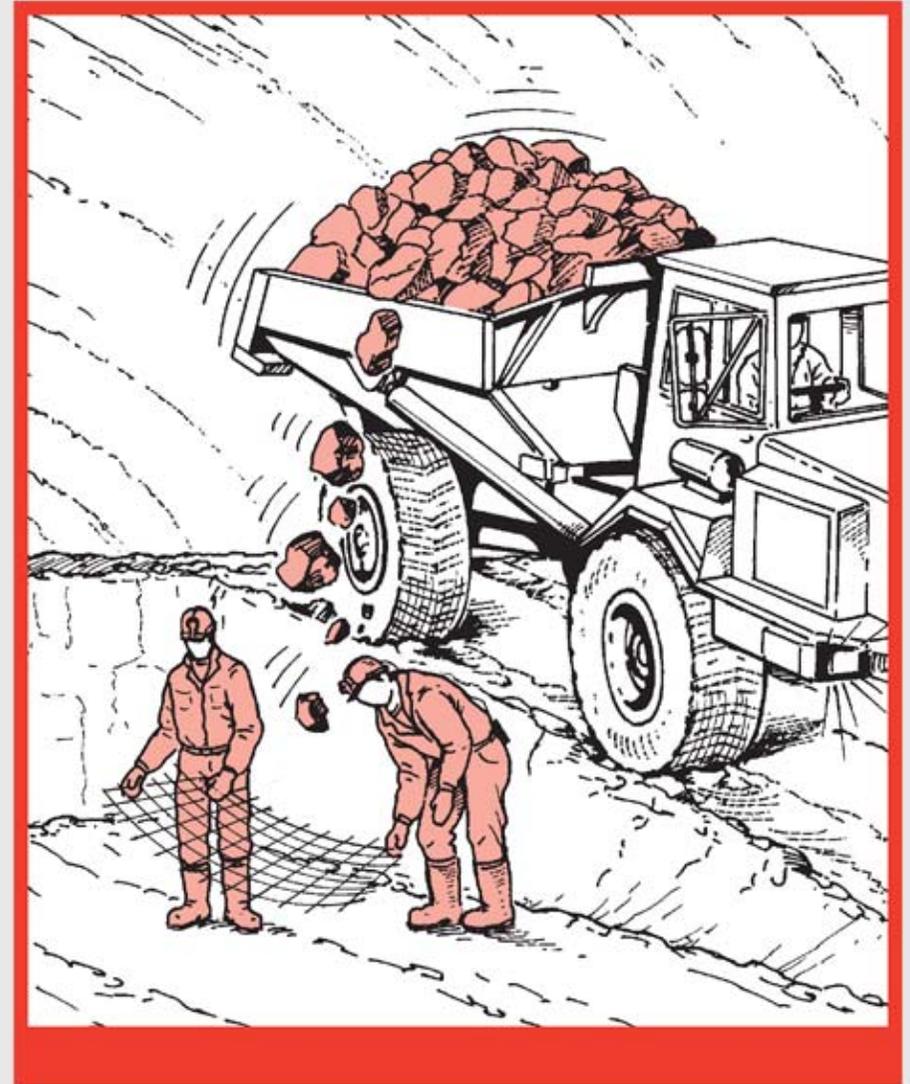
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القيادة العكسية

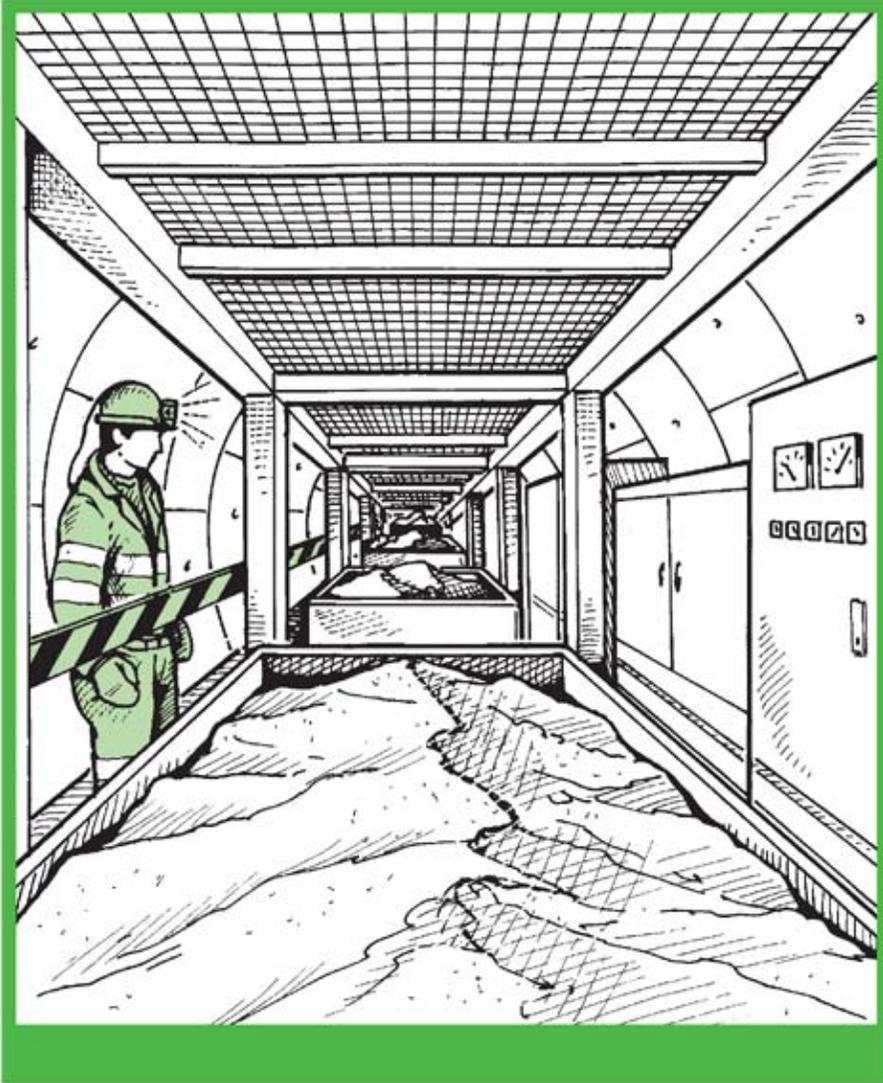


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المساحات الضيقة بجانب عربات السكك الحديدية

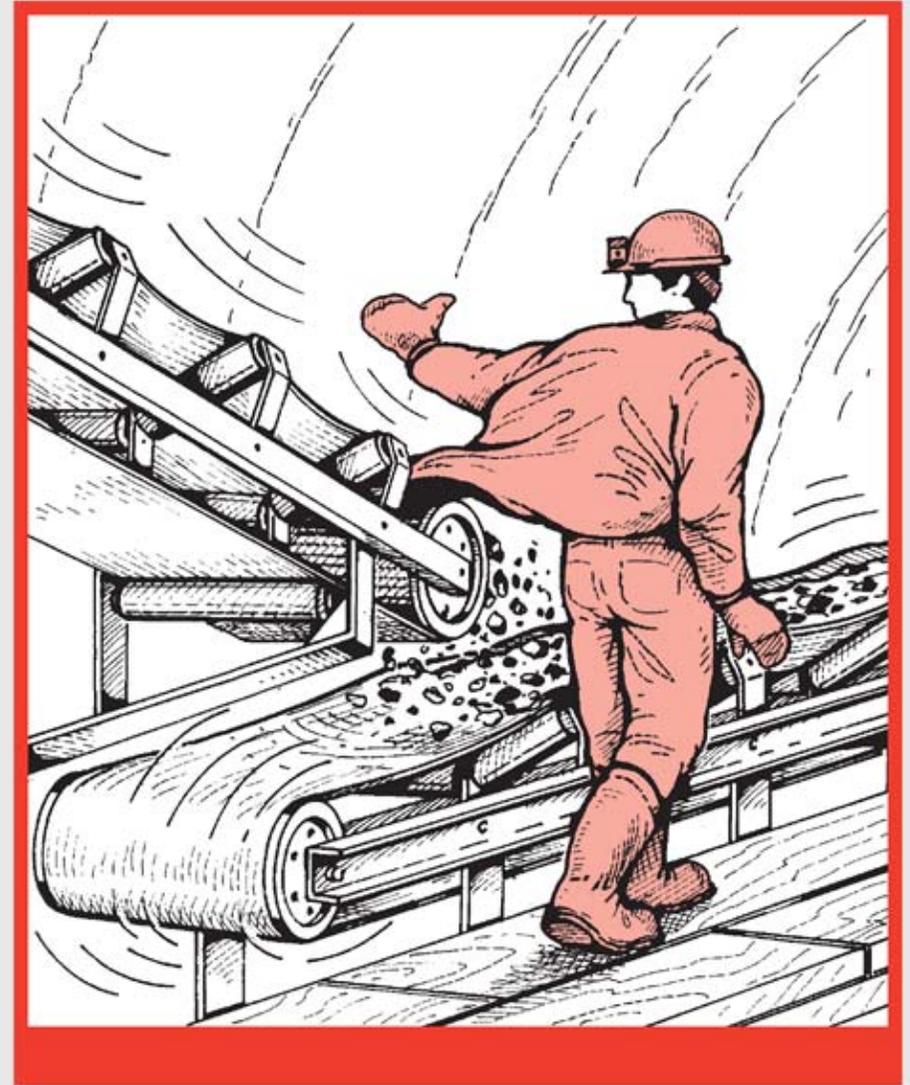


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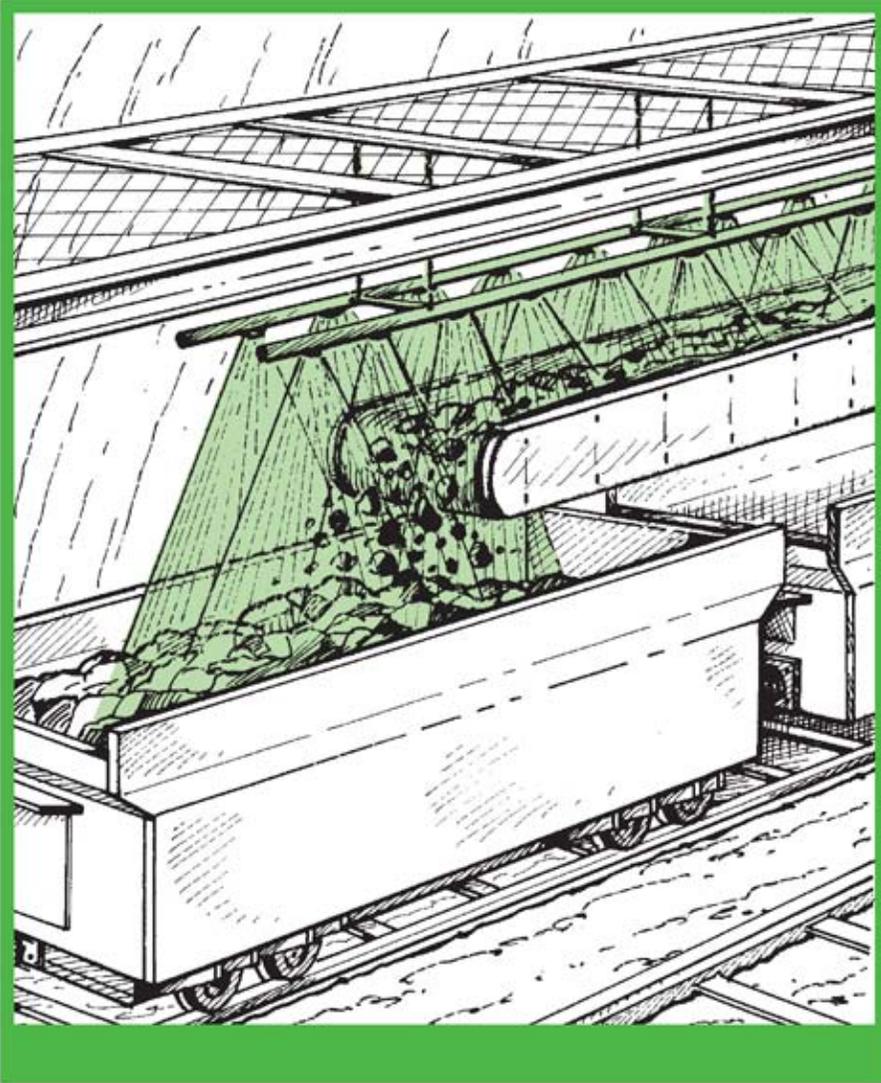
النقل بالسير الآلي



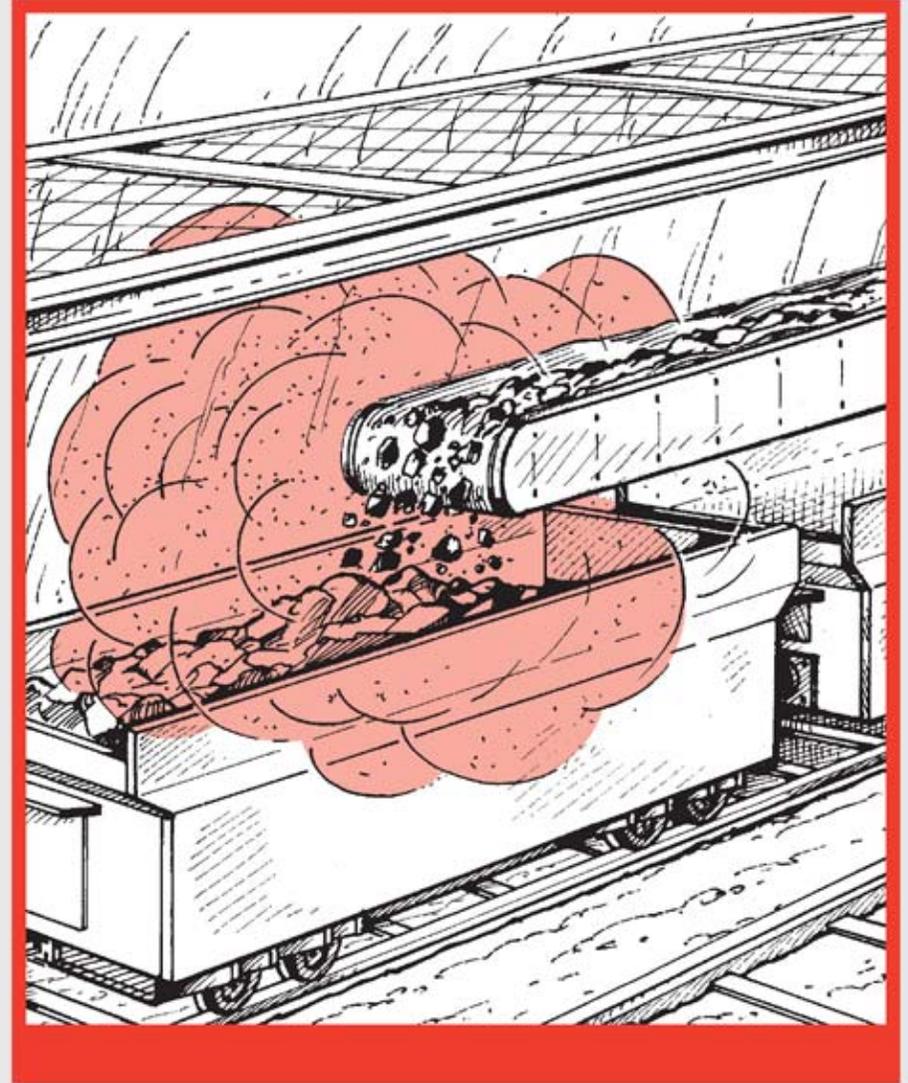
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٦,٨ النقل بالسير الآلي (نقط الانتقال أو التفريغ)



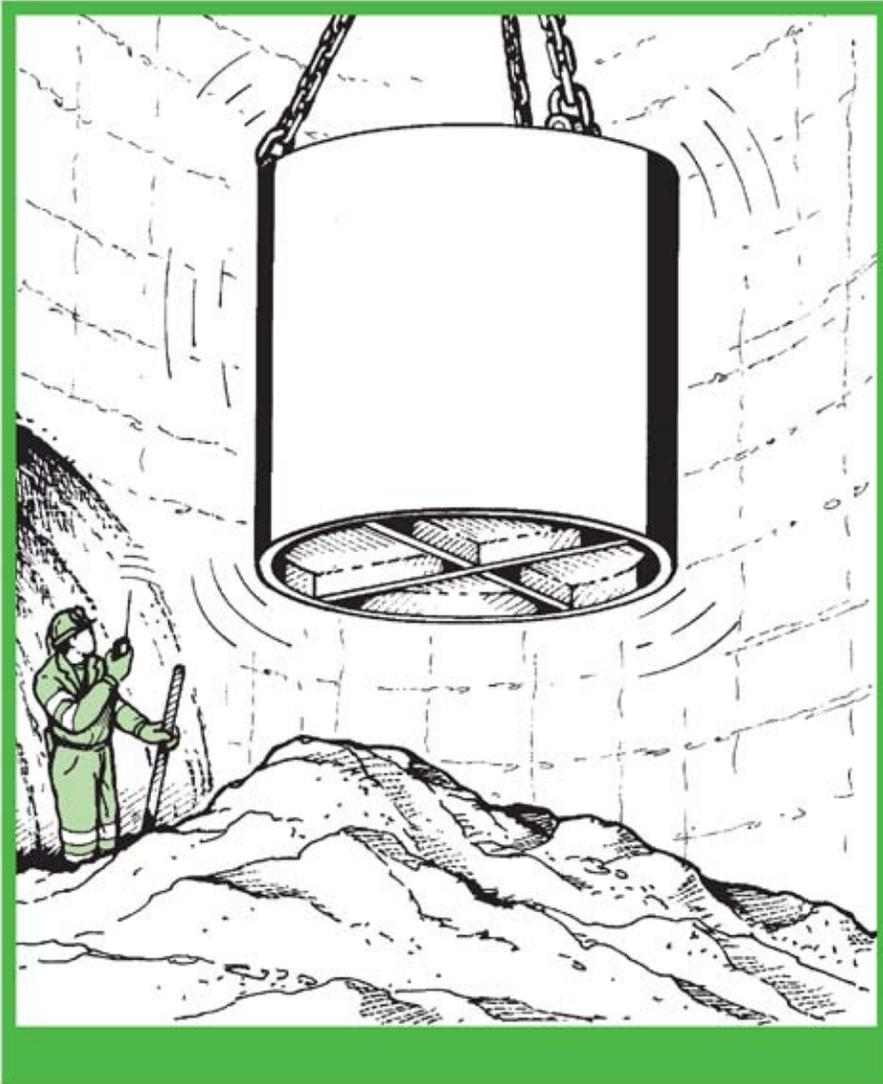
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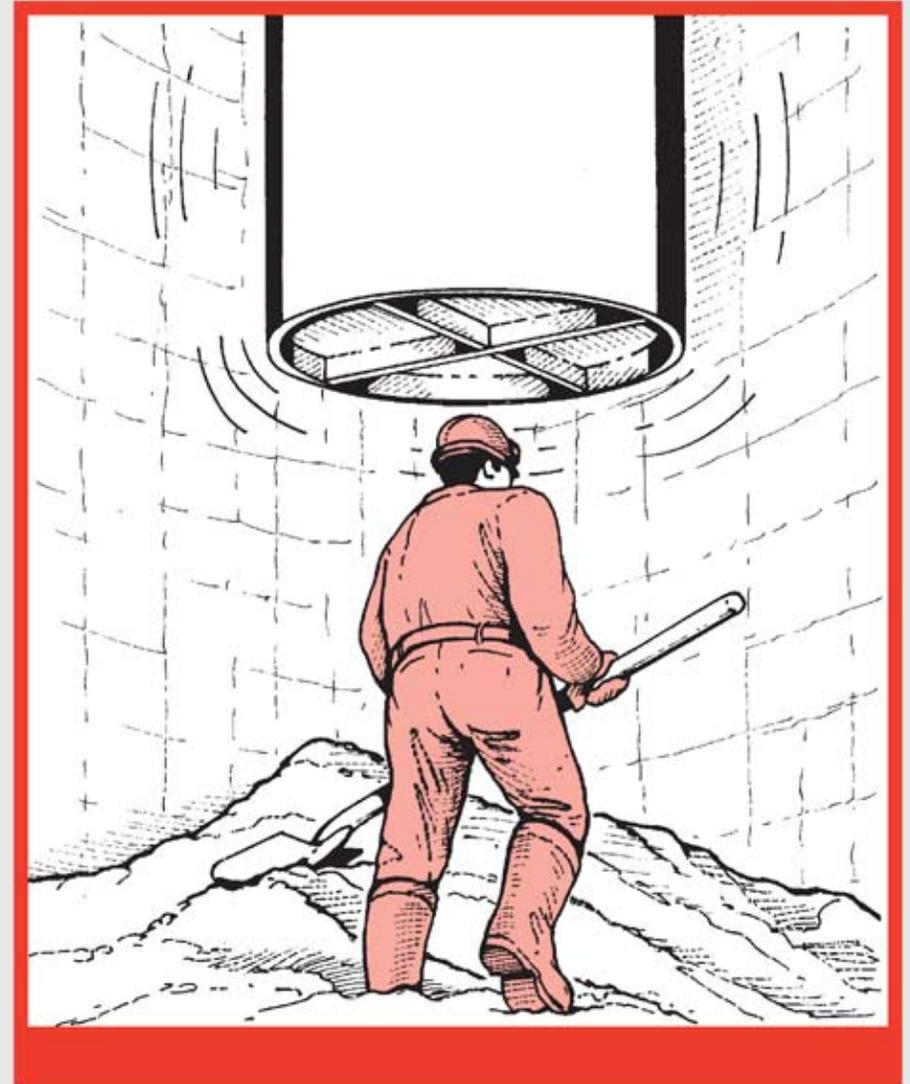
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النقل داخل آبار الحفر (إزالة ناتج الحفر)

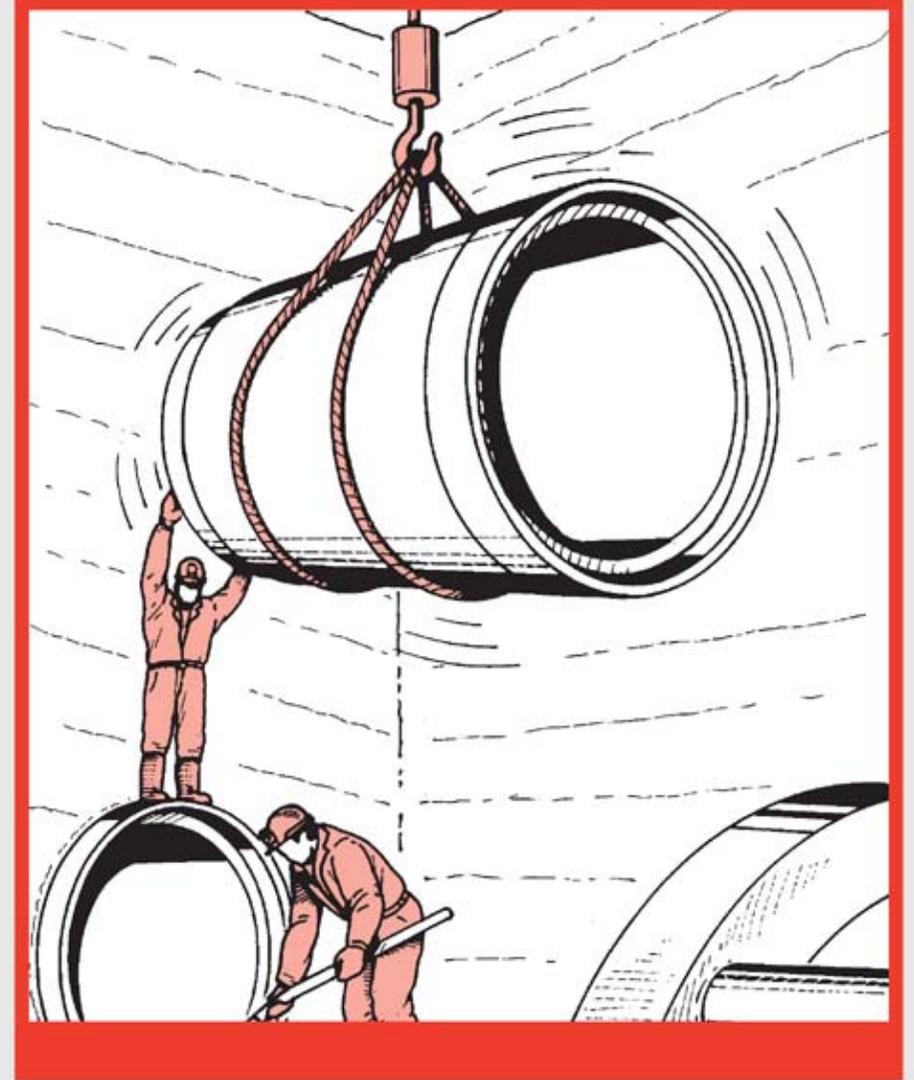
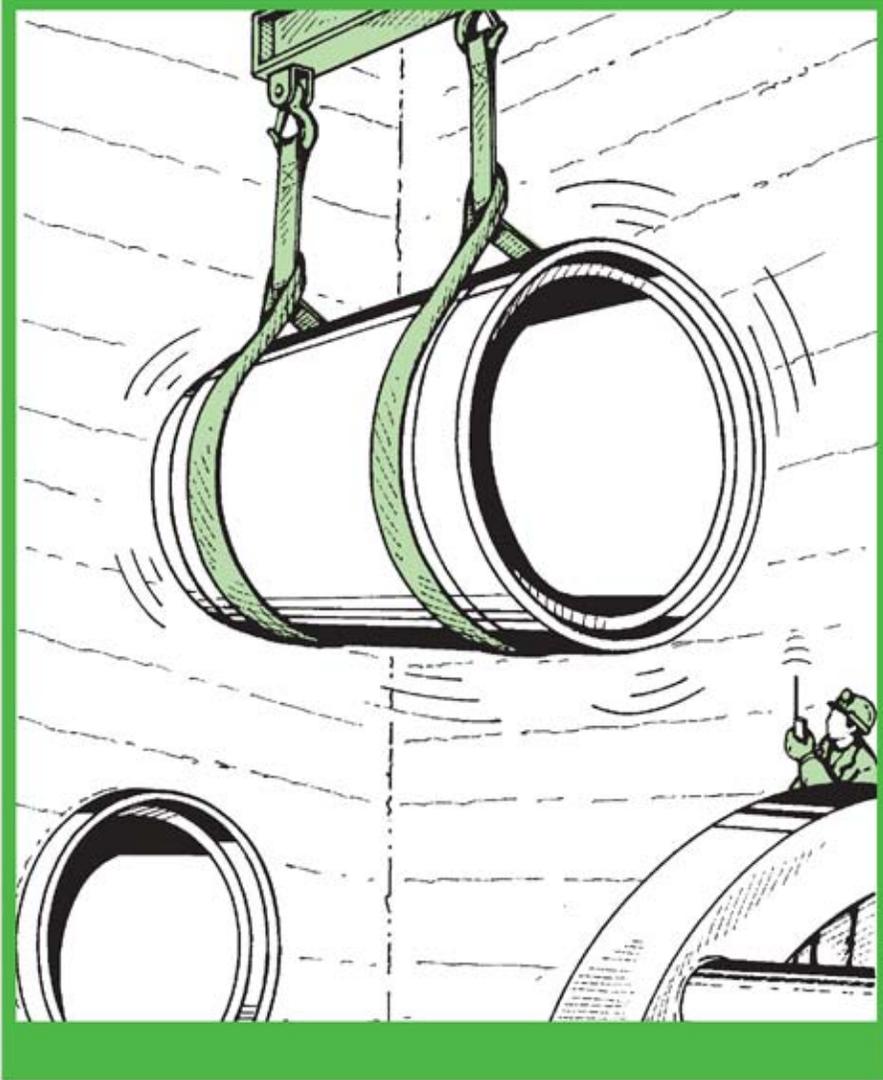


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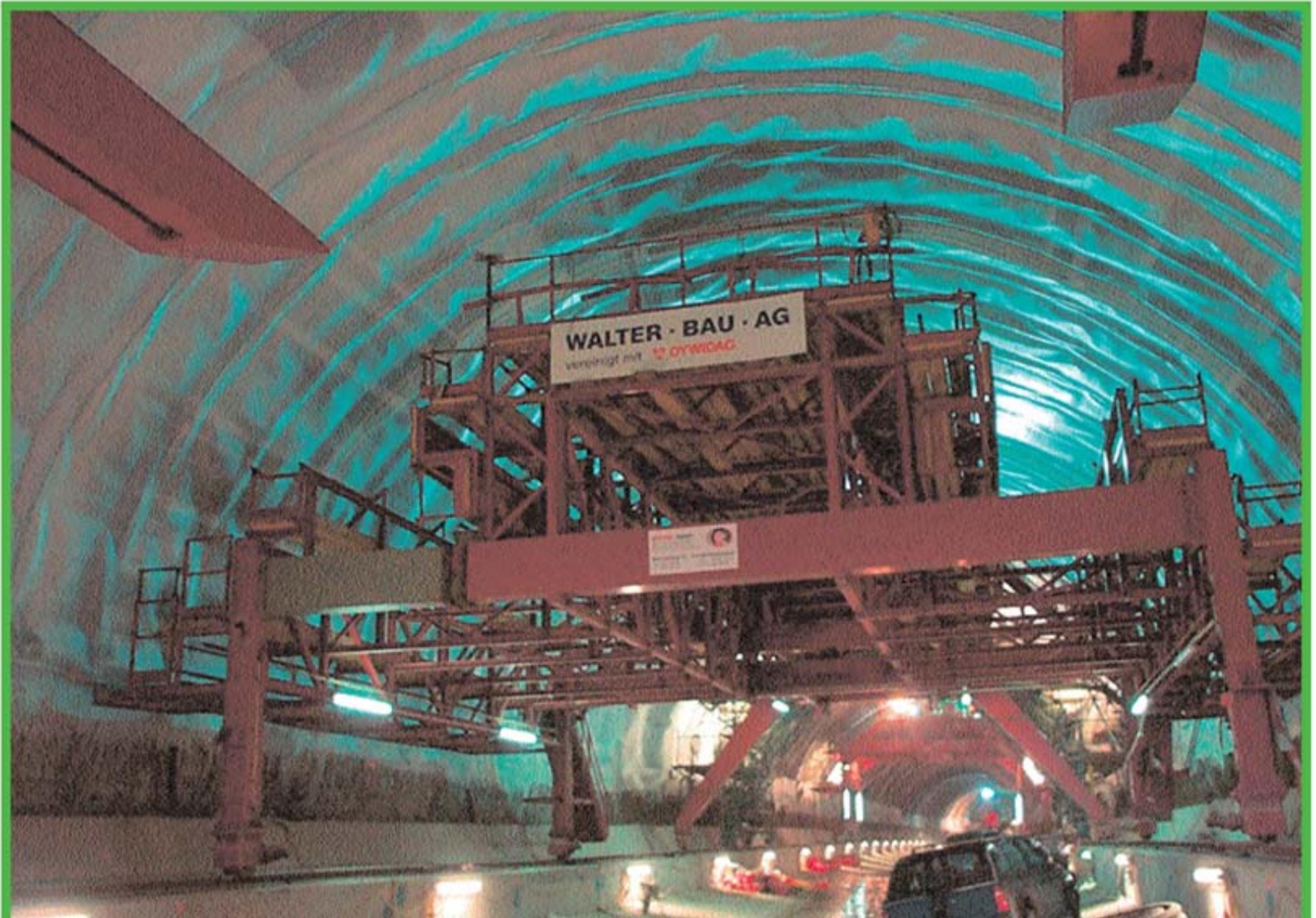
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٦,١ ♦ النقل داخل آبار الحفر(الأحمال والمعدات)



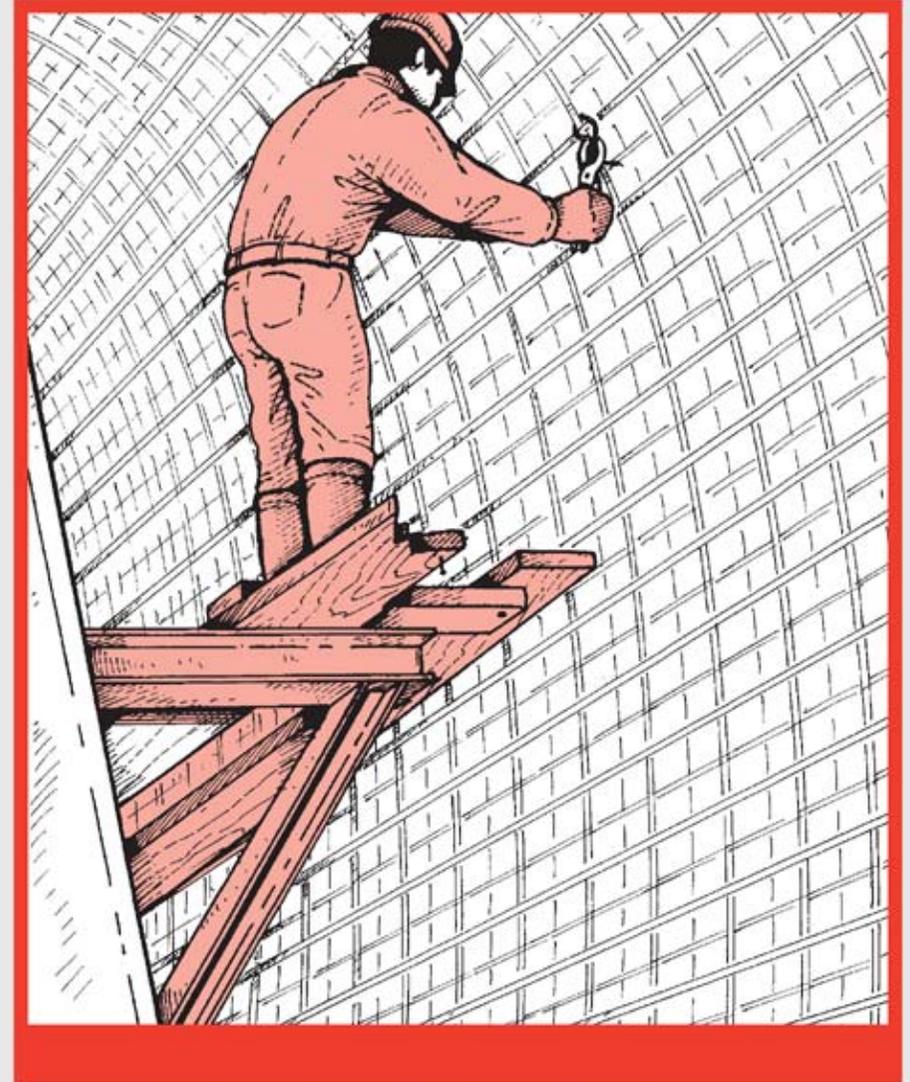
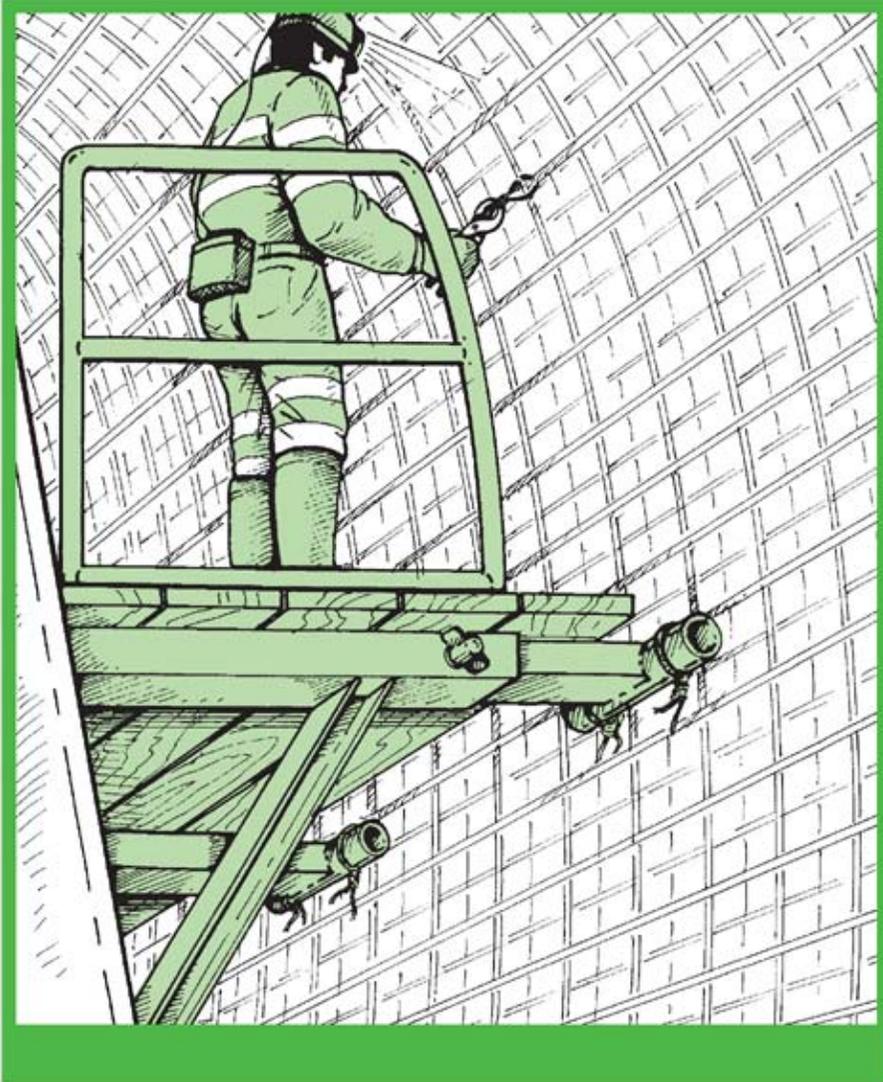
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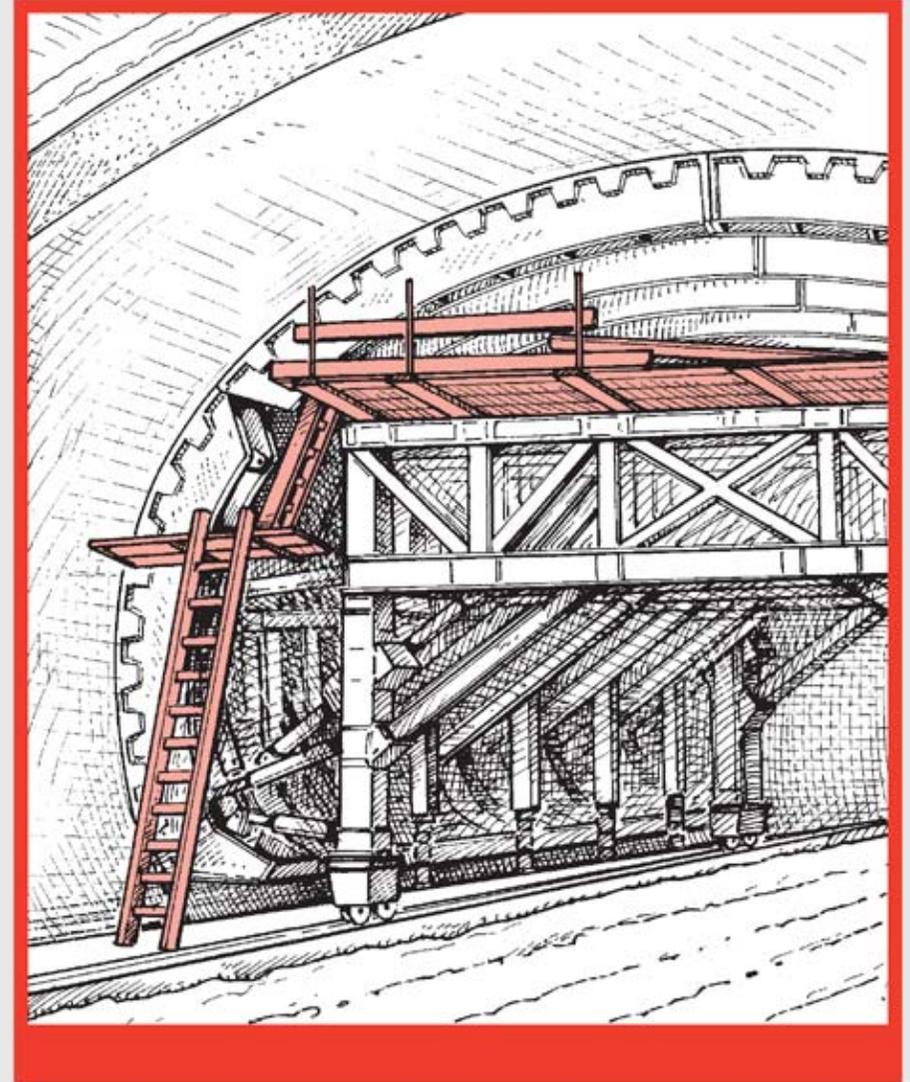
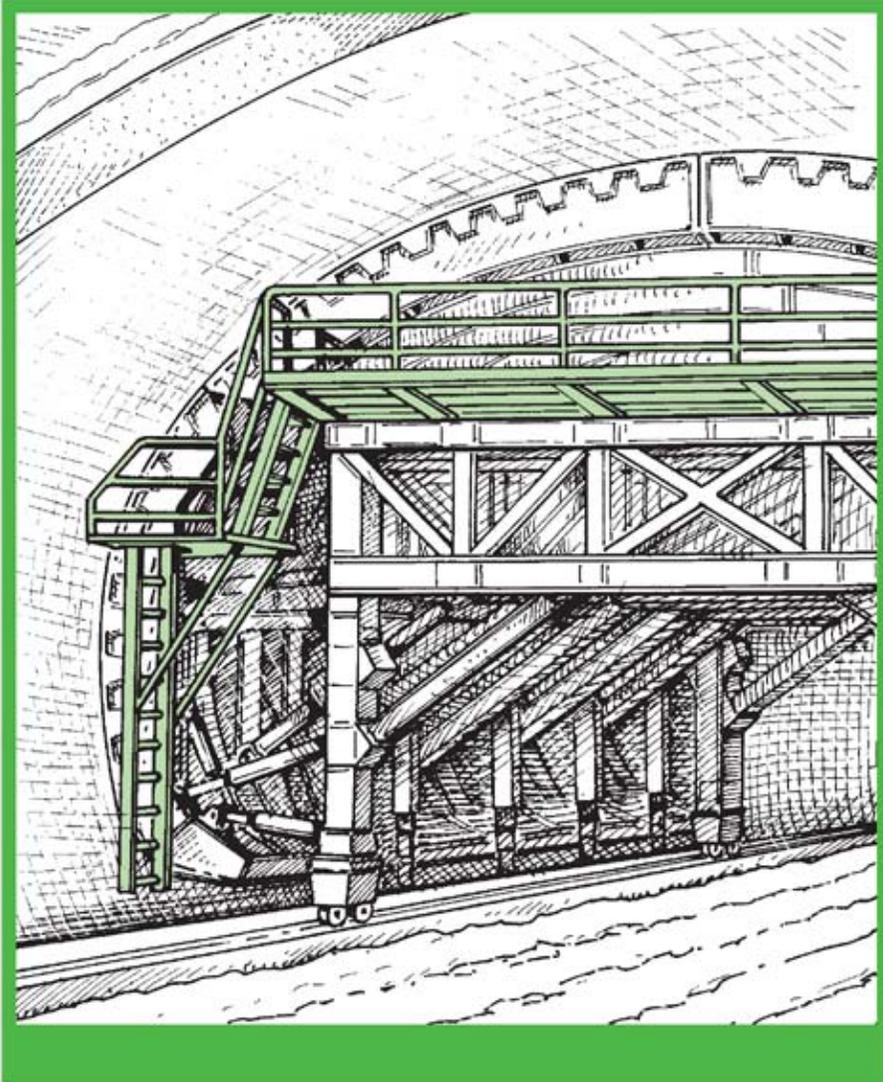
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تركيب حديد التسليح



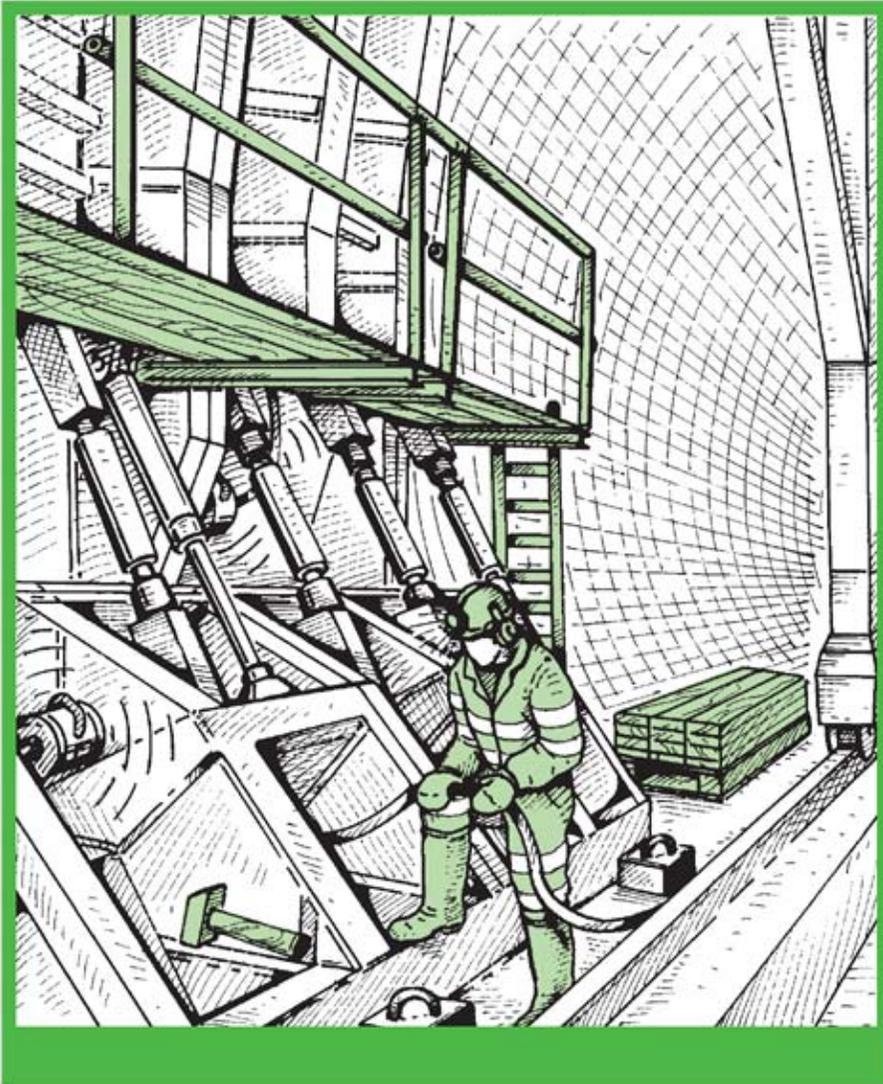
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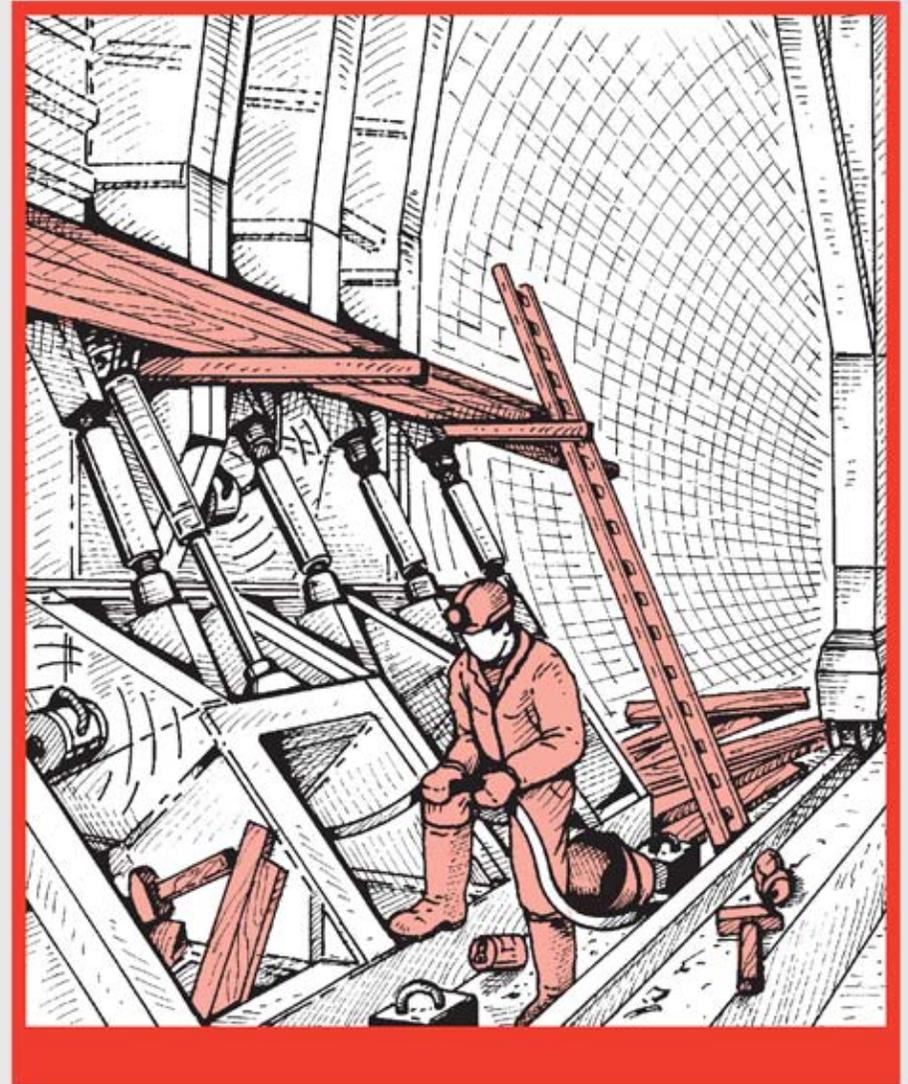


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ماكينة حفر الأنفاق (TBM)

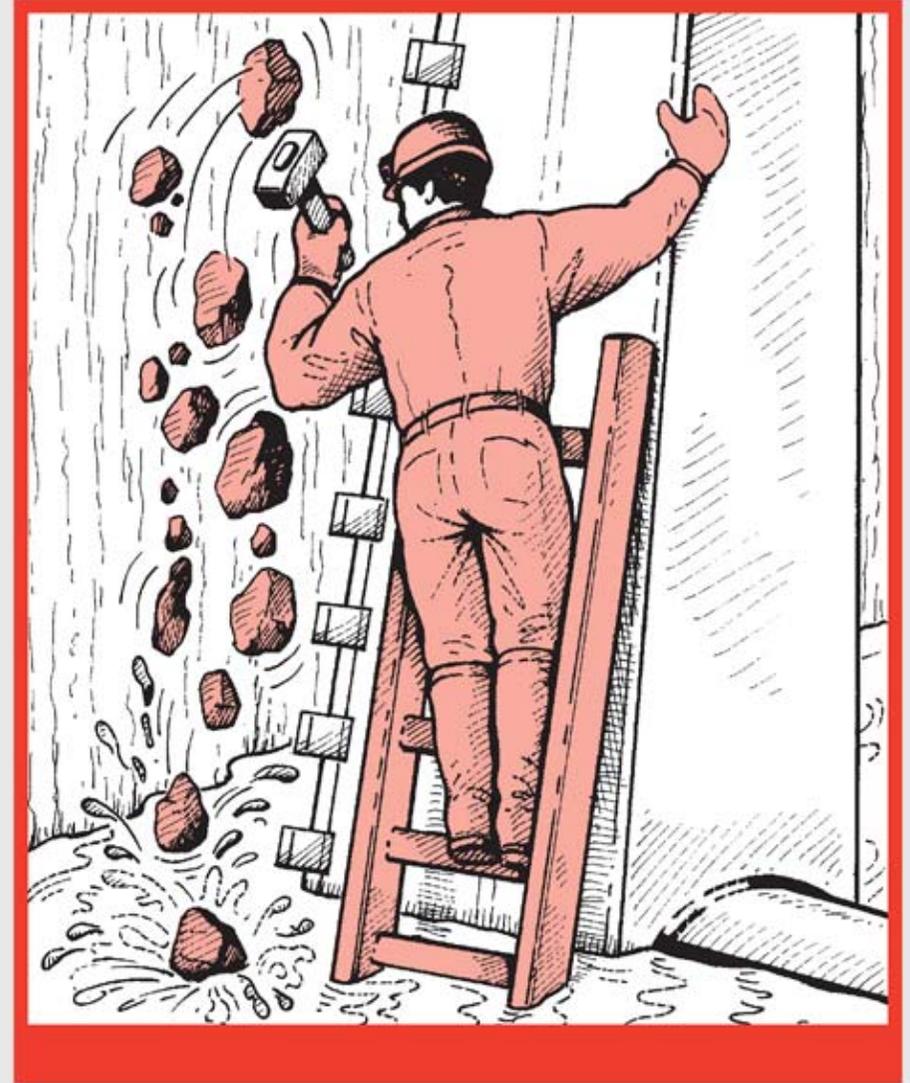


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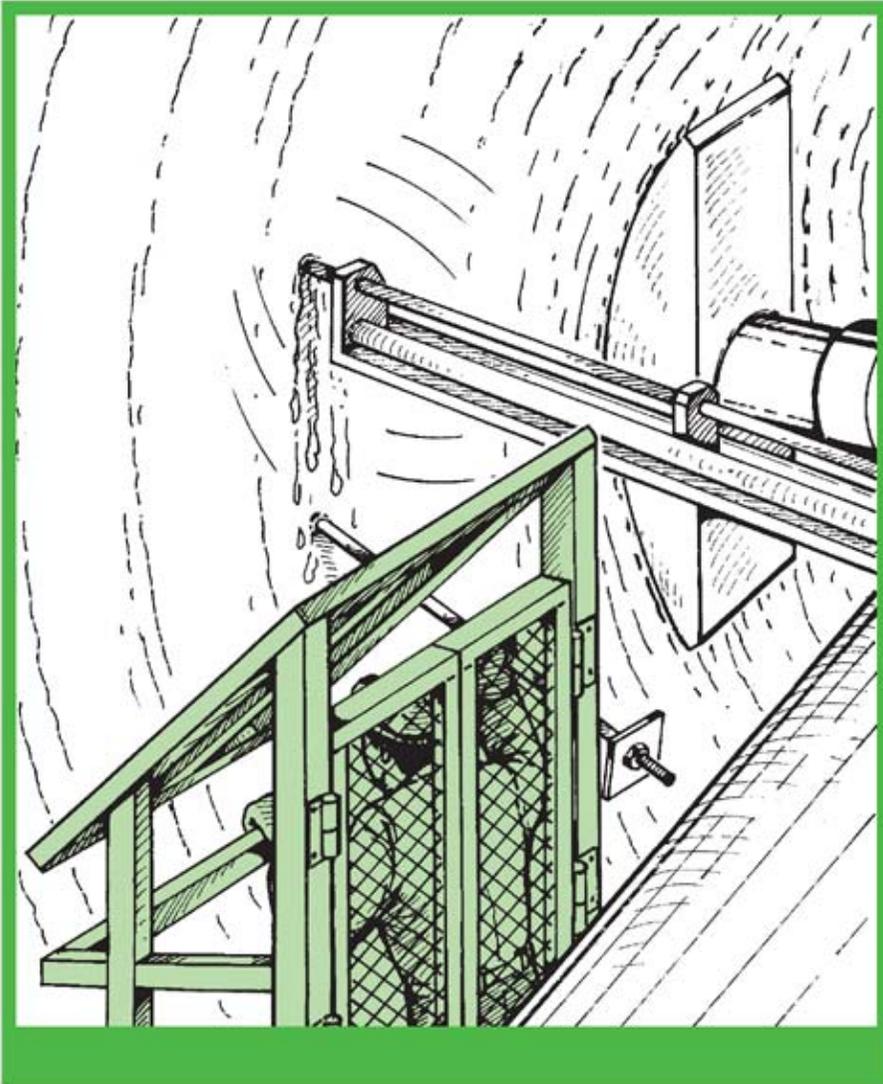
صيانة الماكينة ذات الواجهة المصمتة



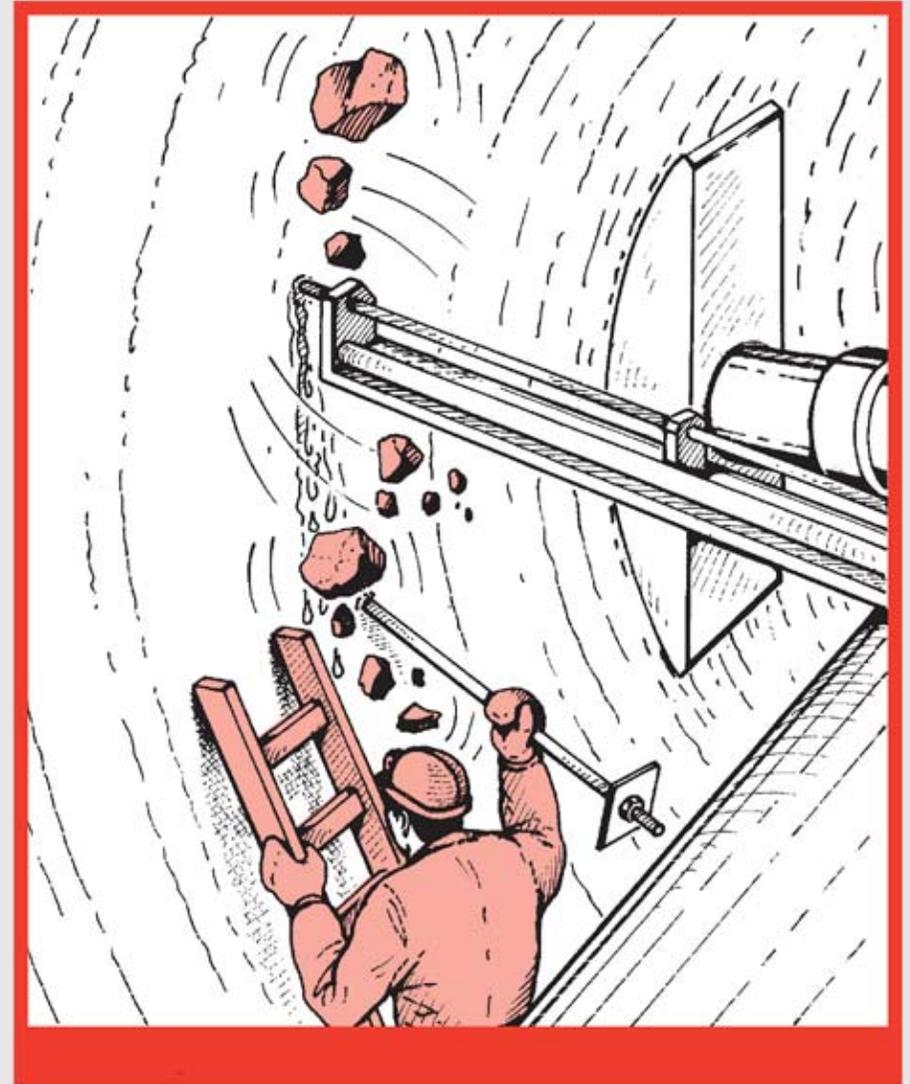
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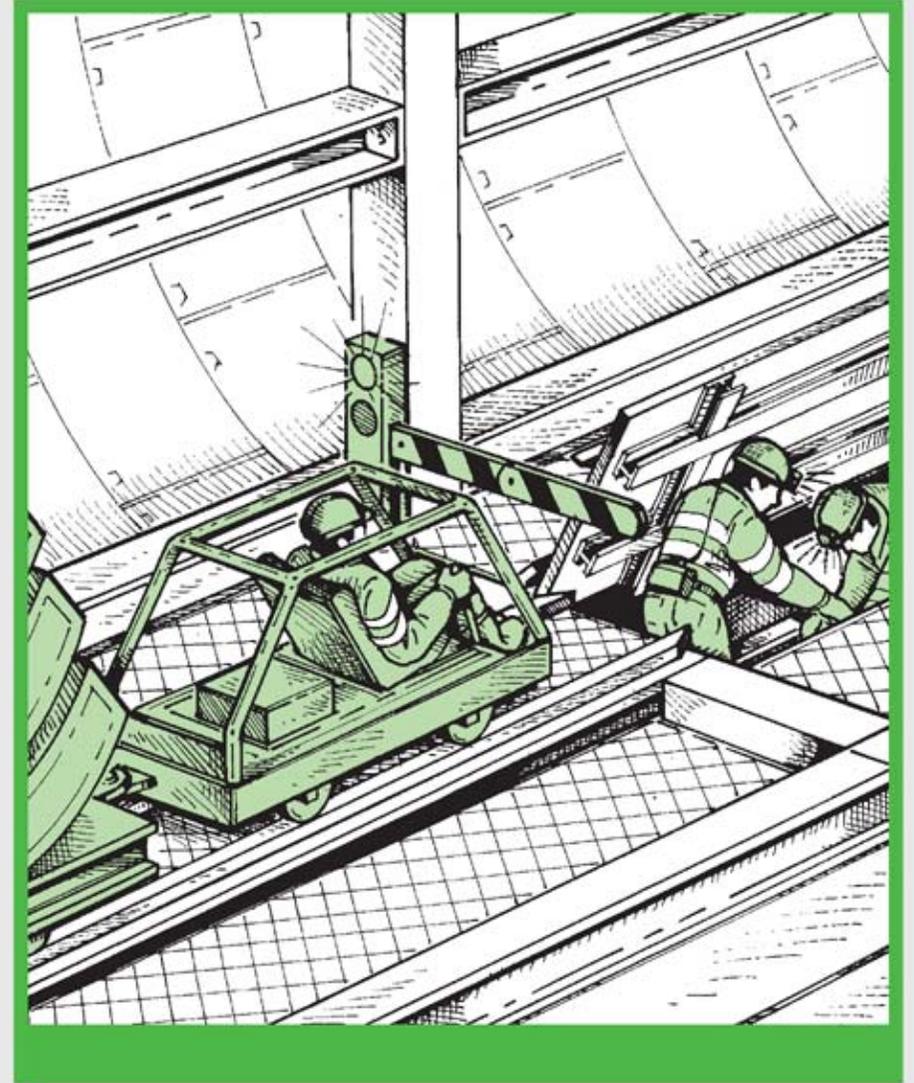
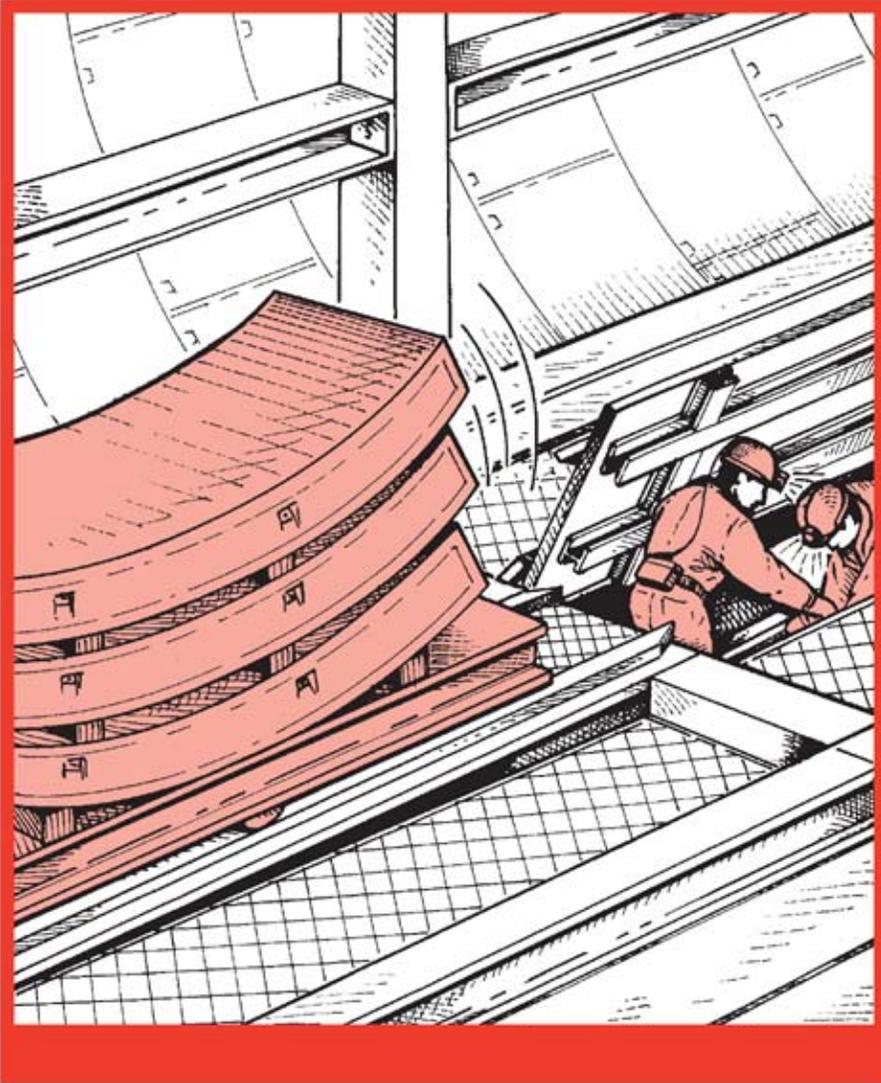
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الحركة والتقدم داخل ممرات وأنفاق الخطوط الحديدية



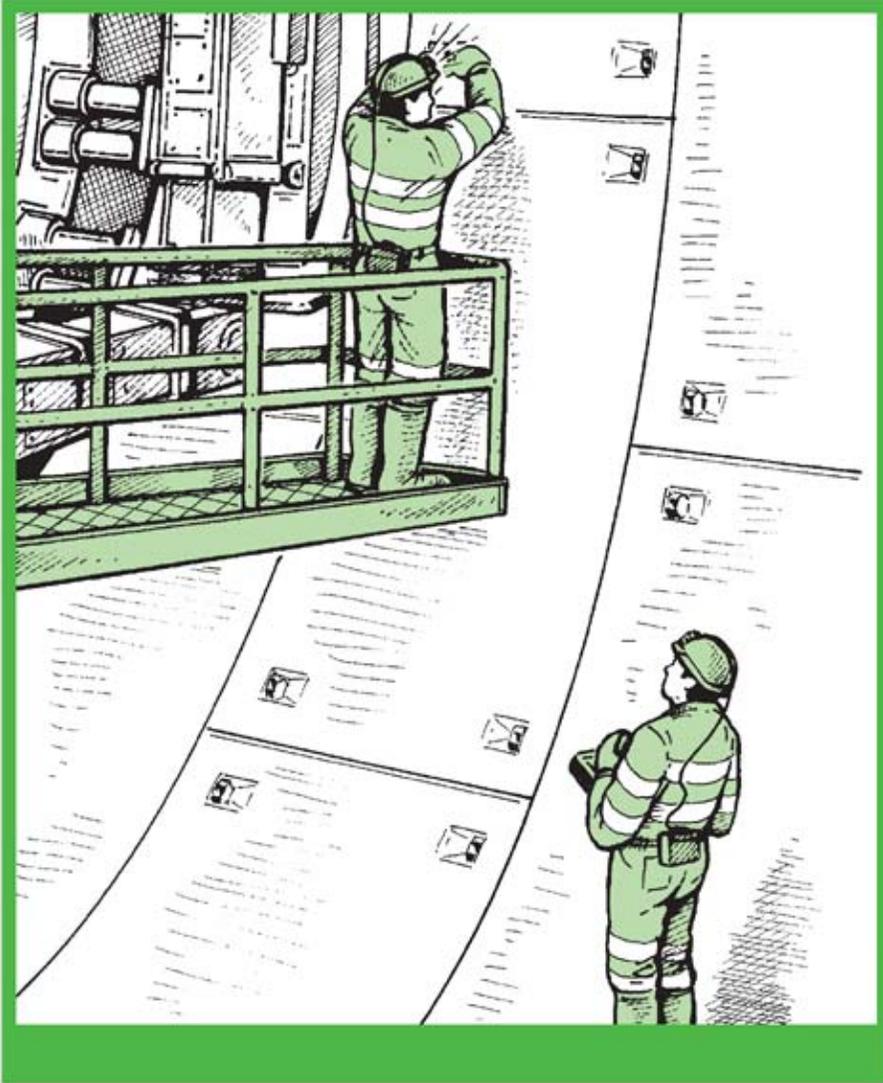
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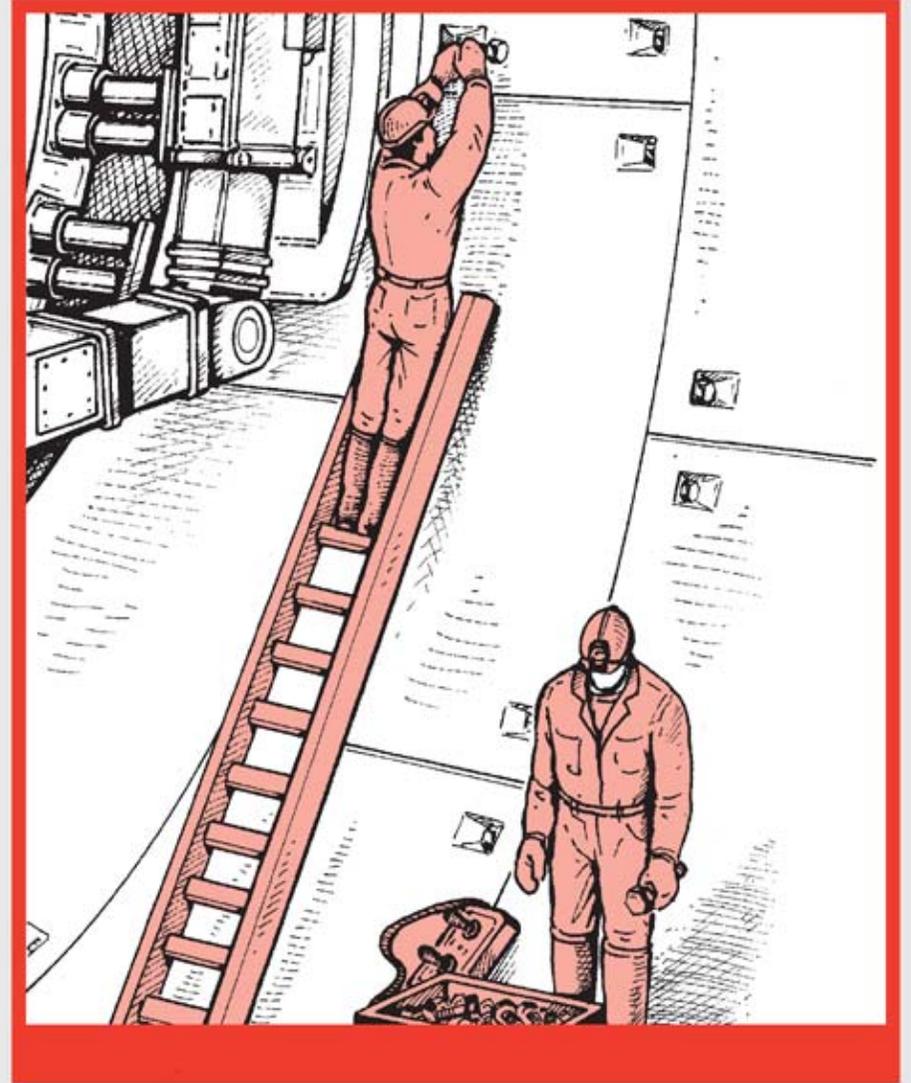
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تركيب قطاعات النفق (حالة نفق كبير)



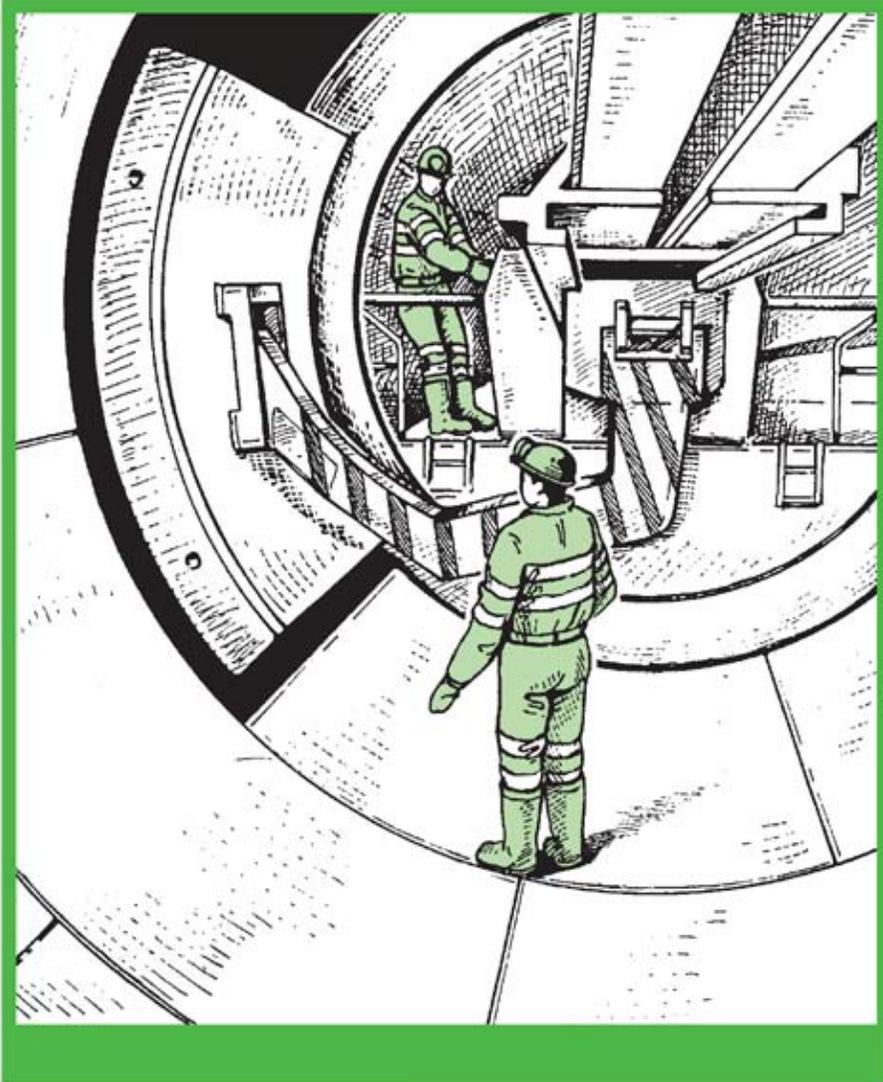
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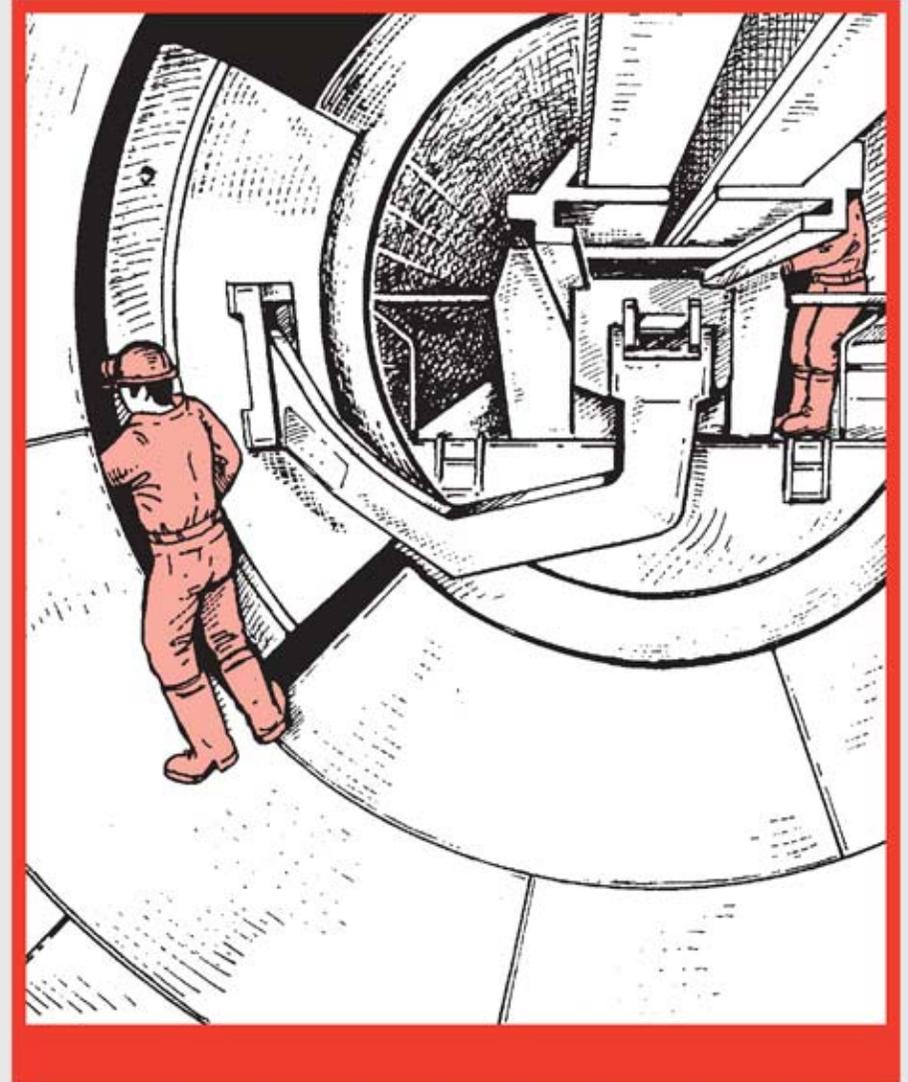
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تركيب قطاعات النفق (حالة نفق صغير)

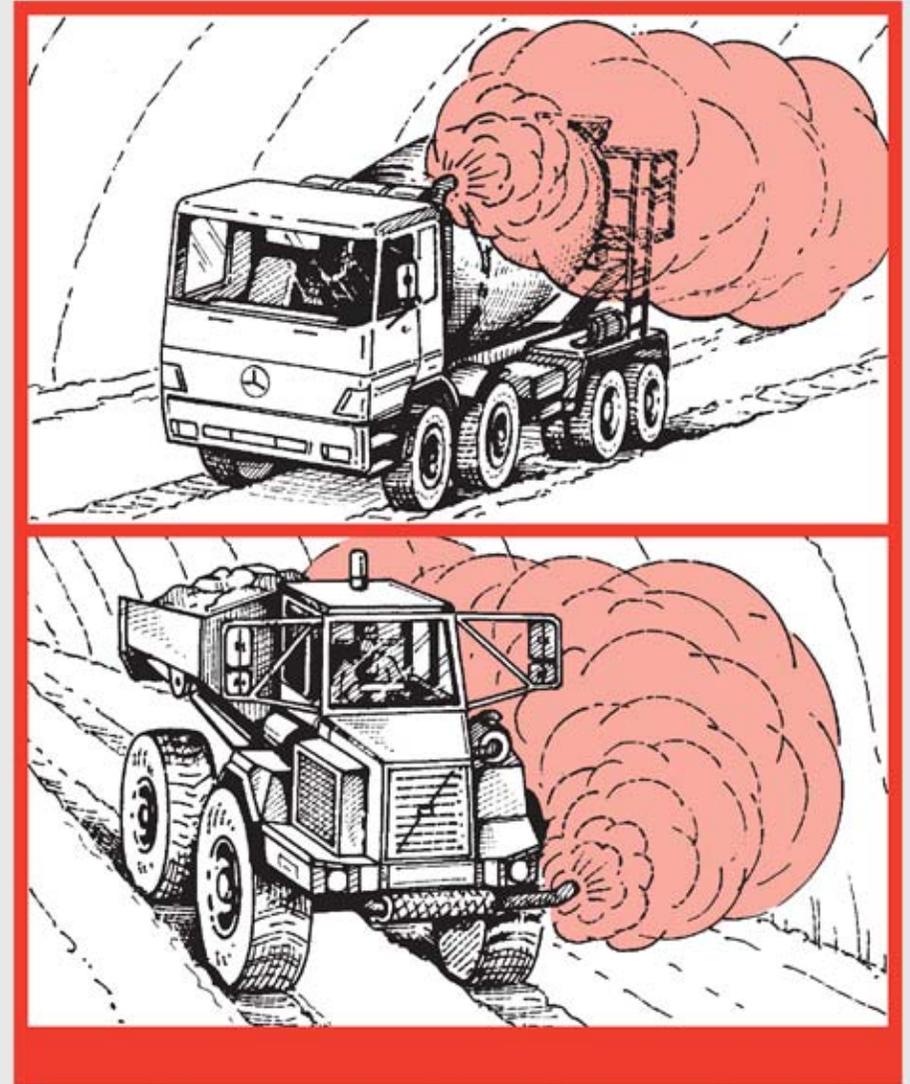
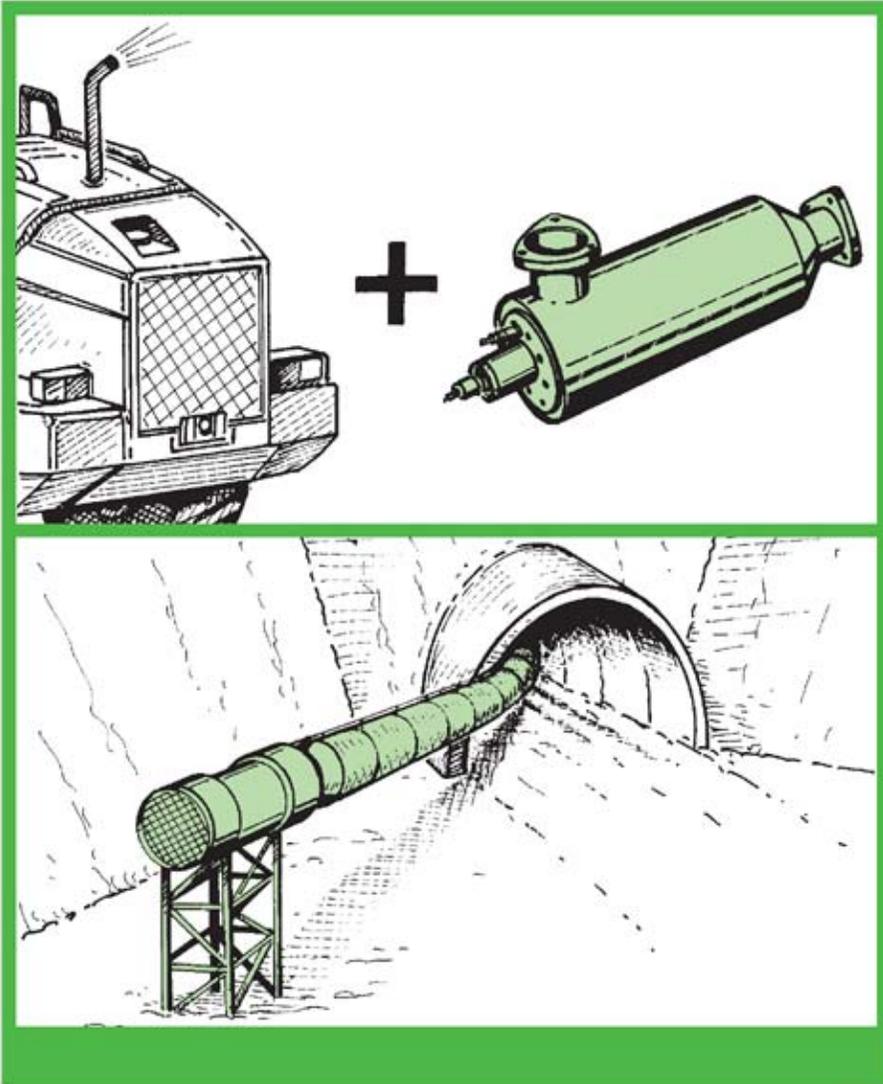


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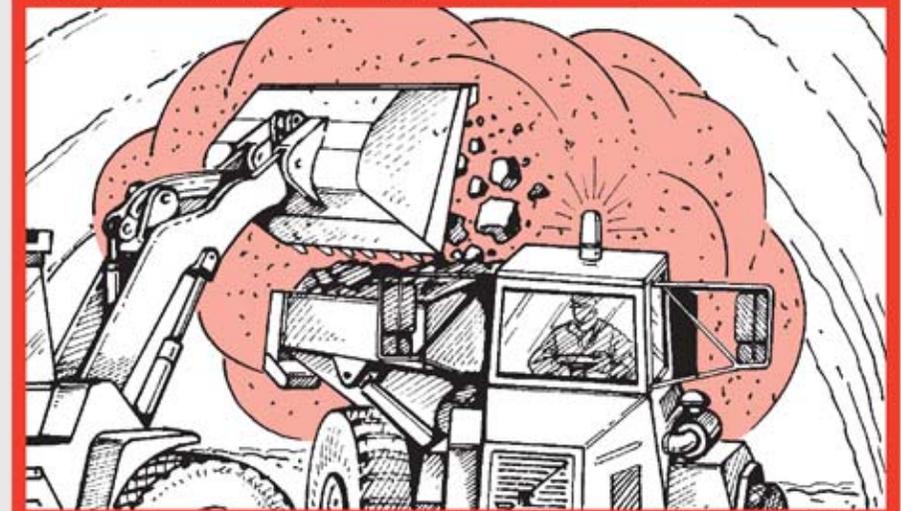
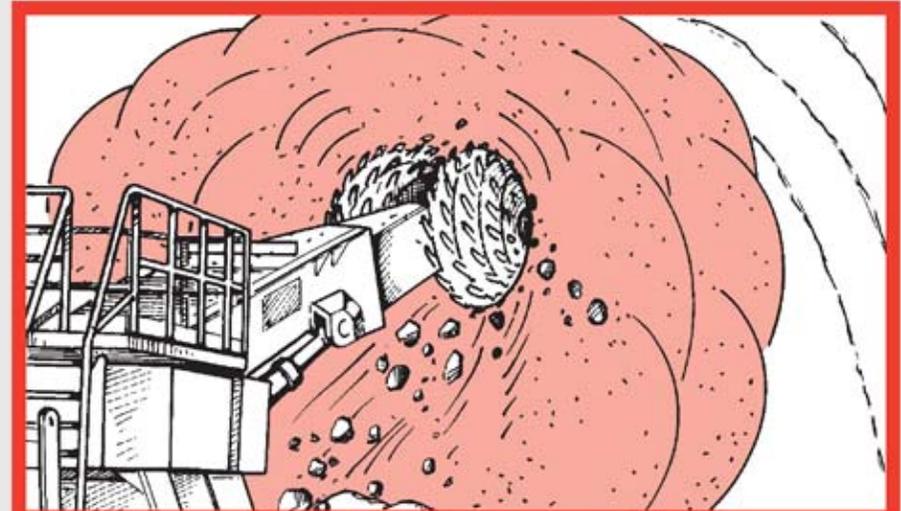
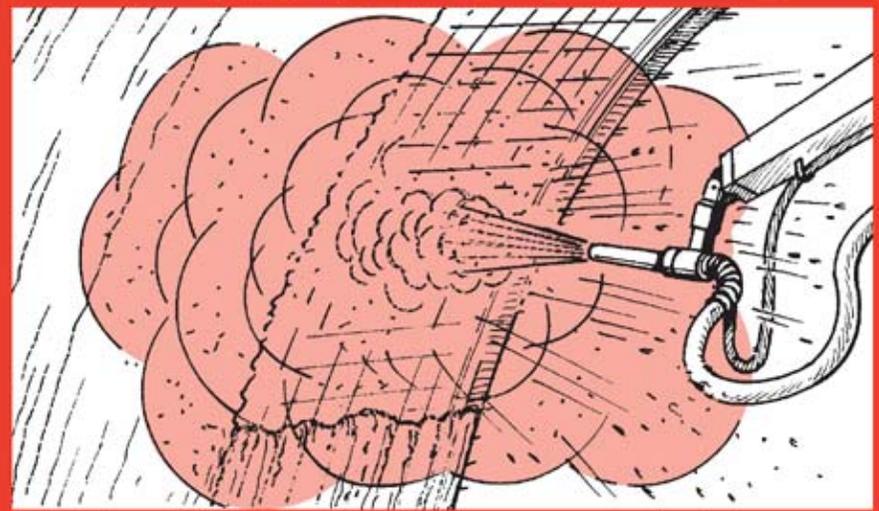
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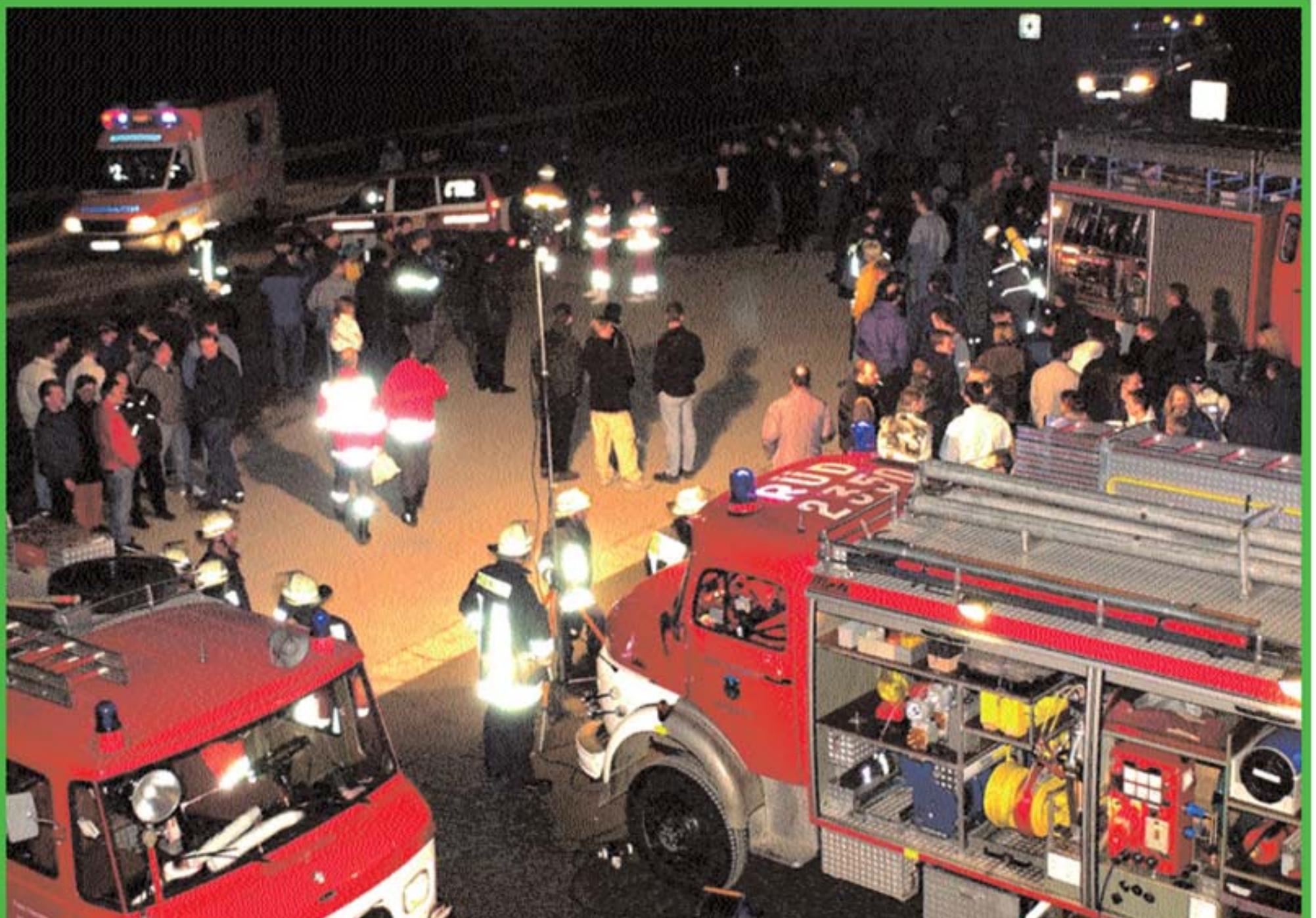
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الاتصال بالطوارئ



إجراءات فورية

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نقل المصاب إلى المركز الطبي



الإسعافات الأولية

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Züblin, Bilfinger + Berger, Hochtief, Baresel,
Wayss & Freytag, Wolff & Müller

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ARGE Pumpspeicherwerk Goldisthal
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شكر

ITA would like to thank the German TBG
and all the members of working group n° 5
for their tremendous work,
Dr. Martin Herrenknecht
of Herrenknecht AG,
Mr. Klaus Langendorf
of Liebherr Hydraulikbagger GmbH,
Mr. Karl-Heinz Wennmohs
of Atlas Copco MCT GmbH
for their support in the graphical design
of this booklet.

