



Solutions suite to your constraints

IMPROVEMENT • SECURING • MOUNTAIN • URBAN



INTRODUCTION

Since **ACRO BTP was created in 1999**, we have successfully adapted a continuous investment policy in order to **provide our customers efficiency and responsiveness**. More than a simple service provider, today ACRO BTP is a real partner on your projects, thanks to an extensive fleet of heavy equipment adapted to highly qualified personnel, in all our areas of activities.

There is real cohesion within the company, which guarantees unfailing responsiveness **driven by the motivation of all employees**. In a setting reserved for mountain enthusiasts, there is a real mixture of skills between engineers, field superintendents, team leaders,

drill operators, fitters, rope access technicians, etc... organised into hierarchical teams: an essential combination for successful jobsites. The current difficult market conditions constantly oblige us to adapt, especially by working like a veritable **«made-to-measure tool»**. But irrespective of the constraints, ACRO BTP continues to pursue the same objective: **ensure your projects run smoothly, consistent with quality and environmental standards**.

For more information, please visit our website:
www.acro-btp.fr/en.

Identity card

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ACRO BTP's approach

Since 1999, **ACRO BTP has met all challenges and works for your safety and security.** Having grown continuously since its creation, both in terms of humans resources and equipment, today the company is **a veritable partner on your projects!** Bolstered by its experience, ACRO BTP offers its services in 4 major areas of activity: **ground improvement and stabilisation, securing road and rail areas, mountain projects, projects in urban settings.**

All the projects that we work on mobilise several construction trades. In the initial stages, design offices comprised of engineers and seasoned professionals work on establishing a detailed feasibility and costing project. Once validated, our teams carry out and monitor the project consistent with quality and environmental standards. **An approach that ensures each project is successful.**

4 AREAS OF ACTIVITY



IMPROVEMENT

Ground improvement and stabilisation

carried out with new generation equipment, suited to all situations.



SECURING

Securing road and rail areas by **installing rockfall** netting and wire fencing as well as slope trimming and blasting.



MOUNTAIN

High altitude work: securing and developing ski areas and tourism sites, and installing avalanche barriers.



URBAN

Projects in urban settings: window washing, cleaning and restoring facades, assembling metal scaffolding and dismantling chimneys.

The know-how of professionals

Today ACRO BTP has a broad range of intervention that enables it to respond to and tackle all kinds of problems, whether it be **ground improvement and stabilisation, securing sites, mountain projects or projects in urban settings.** This unique know-how based on teams trained in the sector's continuous

advances has driven indreasing growth since ACRO BTP's creation, both in France and abroad. And because safety and security can't wait, we have an on-call **team available 24 hours a day, 7 days a week that can be operational in case of an emergency** (landslides, collapses...).

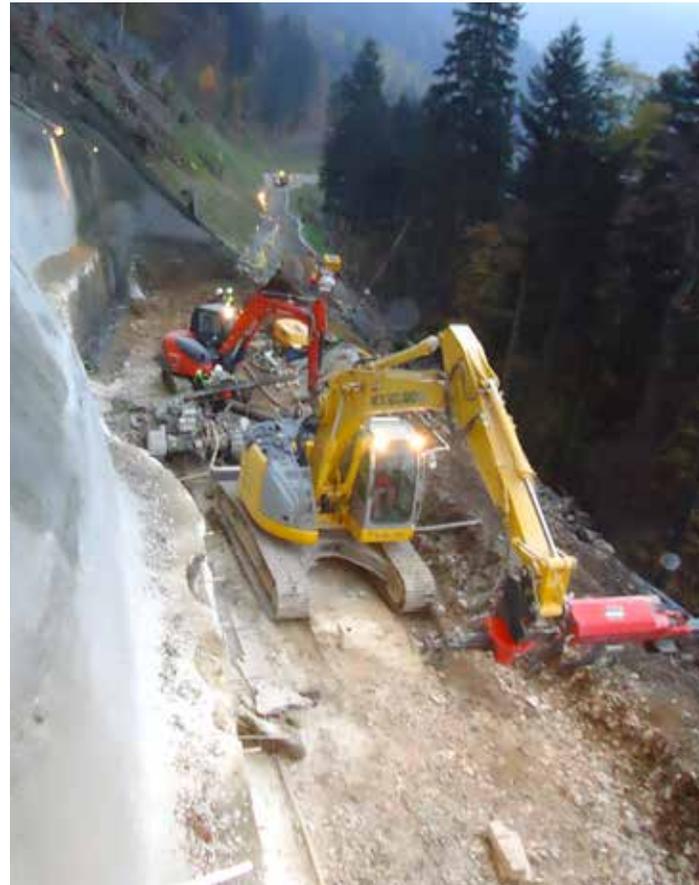


“An **equipped on-call team** that can intervene **24hours/day** and **7days/week** in case of an emergency”

Read more: www.acro-btp.fr/en

★ **Our strenghts**

RESPONSIVE
COMPETITIVE
ADAPTIVE
INNOVATIVE



Ressources

- ✦ 300m² of offices
- ✦ 400m² of mechanical workshops
- ✦ 600m² of open storage area
- ✦ 150m² of warehouse
- ✦ 7000m² of storage area
- ✦ 3 heavy transport lorries with cranes
- ✦ 25 véhicules
- ✦ 2 telescopic forklift trucks with 25m turret
- ✦ 20 pneumatic & hydraulic drills (300kg to 2,5T)
- ✦ 6 hydraulic drilling rigs (3T to 15T)
- ✦ 1 backhoe loader
- ✦ 1 power shovel (5T) and 1 power shovel (25T)
- ✦ 1 Bobcat (3,5T)
- ✦ 1walking excavator (5T)

They placed their trust in us



Internationnally

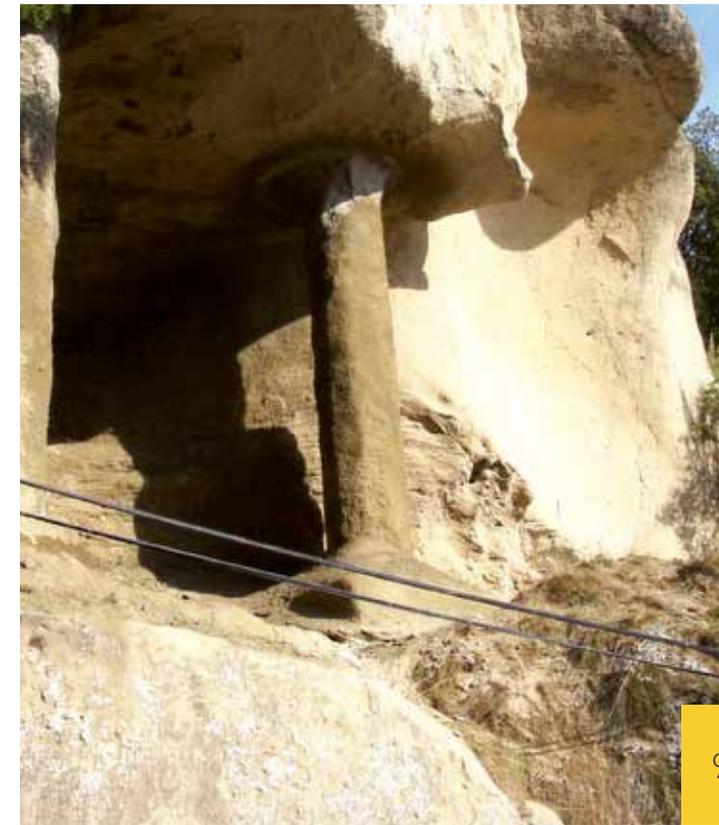
Switzerland, Morocco, South America, Kazakhstan...



IMPROVEMENT

Concrete buttresses & pillars

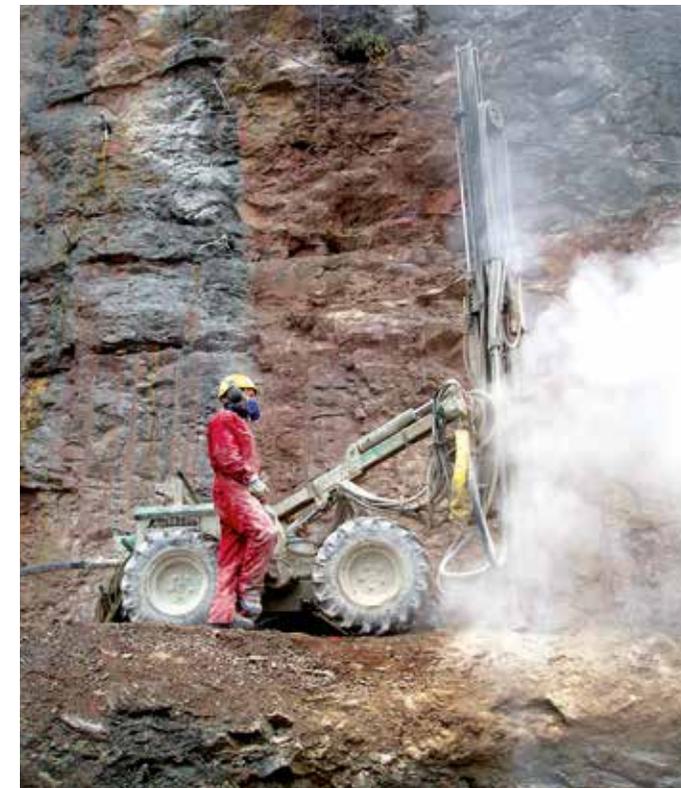
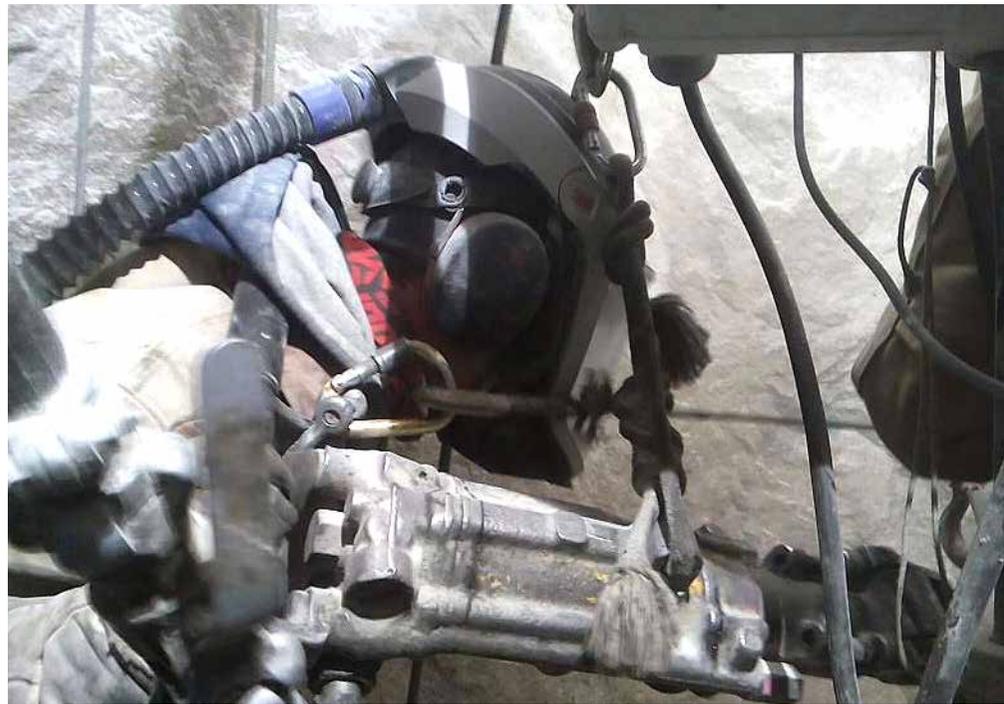
Reinforced concrete buttresses and **concrete pillars** satisfy most ground stabilisation and improvement problems, especially concerning the **stabilisation of rock masses** or **the consolidation of engineering infrastructures**. Depending on the problems and loads involved, several methodologies are proposed: the use of shuttered concrete or simple concrete pillars and beams.



Slope trimming & blasting

Whether it is a matter of **constructing a new infrastructure** or **securing a site, building or road**, slope trimming or blasting may be necessary. Thanks to its expertise, ACRO BTP offers you **intervention methods suited** to

- ✦ **Slope trimming:** to trim slopes manually, different intervention methods are adapted to the volumes of unstable masses to deal with (trimming cannon, hydraulic spreader)
- ✦ **Slops mechanically:** we use mechanical machinery (walking excavator...)
- ✦ **Blasting:** explosives are used to trim the unstable rock mass and do the earthwork before installing the engineering structure. Blasting is also used on glaciers



Micropiles

A micropile is a **narrow cross-section pile (diameter: 80mm to 250mm)**, that can be up to 20 metres long. Laid out in a group to form or consolidate a structure, with ACRO BTP's know-how the micropile provides two types of anchorage related to:

- ⊕ **The friction of the micropile** in the ground surrounding it, which thereby offers pile **driving resistance**
- ⊕ **The end-bearing effect corresponding to the foundation's** vertical support on ground of an acceptable quality.

In the case of stable ground located too deep, the micropile functions exclusively on friction resistance. The number of required micropiles is determined by calculating load distributions by combining the structure's actions and by a geotechnical study of the native soil





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“Methods used in urban settings, due to a lack of history or the proximity of neighbouring structures.”

Berlin & Parisian soldier-pile walls

While performing earthwork, it may be impossible or risky (**especially in urban settings due to a lack of history of the proximity of neighbours**) to excavate by sloping. In this case we choose to build a **temporary or definitive supporting structure** via walls installed before the earthwork. Two different methods can be used. **The Berlin and the Parisian soldier-pile wall**, with adjustments and combinations between the two possible methods. A similar process, with **vertical elements** lowered in the periphery of the earthwork

zone. The earthwork is done in passes, with **reinforcing elements** (backstays or prefabricated concrete panels for the Berlin soldier-pile wall and projected walls for the Parisian soldier-pile wall) between these vertical elements. The different vertical load bearing structures between the two methods: **bored CIP piles or pipes are used on Parisian soldier-pile walls, while metal (I or H) sections rigidify the Berlin soldier-pile wall.**





Nailed & projected concrete walls

Nailed walls satisfy most of the ground stabilisation and improvement problems, especially for **tall retaining walls or retaining walls that have to support high lateral loads**. They are made in successive passes of moderate height, **alternating the installation of self-perforating nails and reinforcing** (wire mesh, welded mesh grids covered with projected concrete...). Projected concrete is used in many areas, such as **underground work, protections of embankments and excavation shoring, rebuilding walls damaged** by fires, etc...



ACROSOLS®

ACROSOLS® (registered design of ARCO DIFFUSION) is a system that can be used to **stabilise the ground without prior earthwork thanks to a lightweight, self-draining metal structure that can be installed quickly** and serves as a retaining wall. The structures are sized based on the surfaces to improve, the geological data of the ground and the planned superimposed loads (buildings, roads, private accesses...). There are multiple fields of application, including: creating

roads, reinforcing riverbanks or pylons, check dams, expanding excavation work... The ability to adapt to all constraints makes **ACROSOLS® the ideal solution** for your ground improvement and stabilisation work! At ACRO BTP our teams have been trained to install ACROSOLS from the creation of the product: **an experience and knowledge of the system that ensures we are effective on your projects.**





“An *innovative* system
for all of your
stabilisation work”



Read more: www.acrosols.com/en

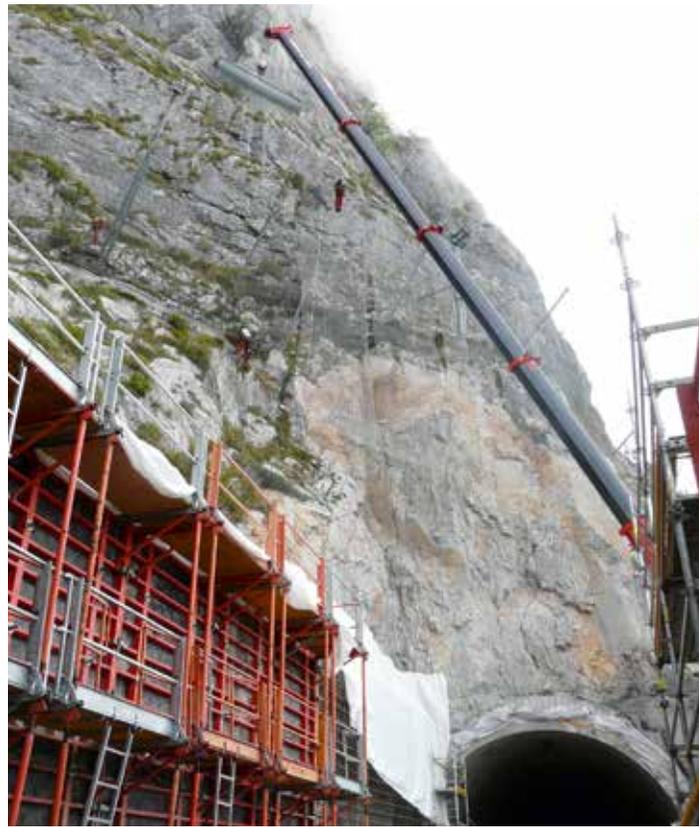
+ The advantages

- ✦ Install with **minimum earthwork** to avoid destabilising the ground
- ✦ **Check the anchorage** while installing the structure
- ✦ **Apply uniform pressure** on the ground, since the structure is placed on the ground using a jack until the service tension calculated for the anchorage is reached
- ✦ Self-draining structure that creates virtually **no hydrostatic pressure**
- ✦ **The structure can be positioned as a reinforcing point in the ground in some configurations** (creation of trails, stabilisation of backfill...)
- ✦ **Integration in the landscape** (examples: standard plant wall, backfilling with calibrated stones)
- ✦ **Fast and economical** construction



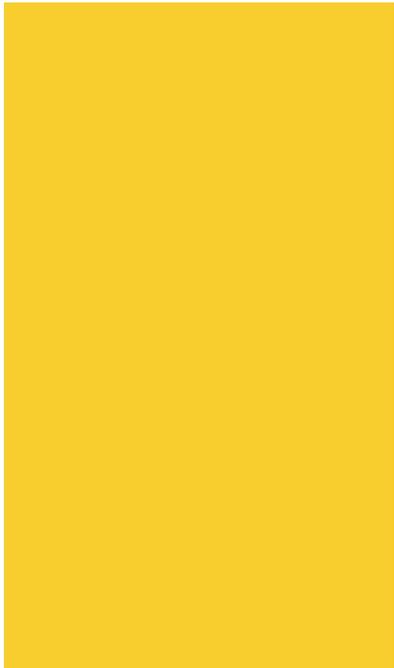
SECURING

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Wire mesh

To protect and secure road and **rail networks, ski areas and houses in urban areas from rock falls**, ACRO BTP offers different wire mesh solutions adapted to the site's constraints and your needs. The characteristics of the wire mesh varies based on **the masses to stabilise or contain.**



Slope trimming & blasting

To secure **the road and railway areas from rock falls**, slope trimming or blasting may be necessary. Acro BTP offers **different intervention methods** based on the volumes of unstable masses to handle.

In most cases, we **blast after an initial securing** based on trimming the slope(s) when the rock masses are too big, in order to break up the blocks. Blasting is also used for work on ski trails, on glaciers or at the entrance to road tunnels.



Rockfall **netting**

To protect and secure **road and rail networks, ski areas and houses in urban areas from rock falls**, ACRO BTP offers different rockfall netting solutions that can be adapted after simulating the trajectography and analysing the masses to contain. This netting **can stop all sizes of rock slides**, from a few dm³ to several m³.





MOUNTAIN

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Soil probing & testing

Acro BTP frequently conducts on site soil probes and tests. The objective? **Optimise the stability of a structure or the sizing of the anchoring** to construct cliff protection and securing structures. We also perform probes for our customers and design offices

on different geological analyses with a view to potentially **constructing nailed walls or other ground stabilisation and improvement work.**



Civil engineering

ACRO BTP takes care of **all of your altitude engineering work, especially for mountain refuges (expansion, exterior landscaping, improvements...)** without **forgetting the construction of footbridges** using lightweight tools adapted to the conditions of working in high mountain areas. Consult us to discover all of our fields of application in civil engineering.



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Our references

- ★ **The Montevervs train** (Compagnie du Mont-Blanc): maintenance of engineering structures, viaduct, retaining wall, etc...
- ★ **Agentière Refuge** (Mont-Blanc Massif): expansion of the refuge, exterior landscaping and improvements
- ★ **Leschaux Refuge** (Mont-Blanc Massif): exterior landscaping and improvement of the refuge
- ★ **Mer de Glace ice cave** (Mont-Blanc Massif): construction of a footbridge





Improvement & securing

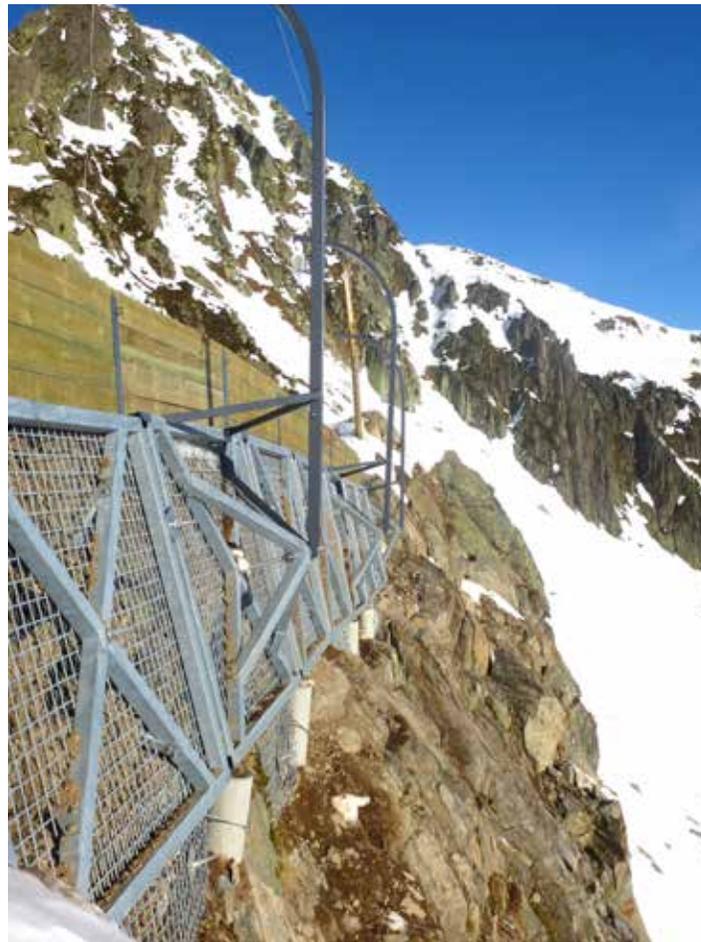
Work improving rock masses and flakes, securing at altitude,

ACRO BTP provides its expertise on high mountain area sites, where the objective is to ensure visitors' safety while preserving the beauty of the setting.

Our references

- ★ **TMB Train** (Mont-Blanc Nid d'Aigle tramway):
securing the tramway track
- ★ **Aiguille du Midi** (Mont-Blanc Massif):
improving rock flakes and installing retaining
nets





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Developing **ski trails**

In ski areas, **ACRO BTP** works to **develop, adapt and manage the different challenges** encountered with the **changing seasons**. All possible equipment and supplies can be constructed based on studies: consult us for custom solutions. Bolstered by its experience, **ACRO BTP** has **successfully exported its know-how internationally** for the **development and expansion of ski stations**, especially in AK Bulak, Kazakhstan.

Applications

- ★ Safety nets along the edge of trails
- ★ Rigid barriers and wind barriers
- ★ Widening of trails in ski areas
- ★ Anchorage for grooming machines
- ★ Dismantlement & removal of old mechanical lifts
- ★ And much more...



Avalanche barriers

In the mountains, protection against avalanches is essential to avoid human injuries and material damages. ACRO BTP uses several systems to secure ski areas, **limit snow slides and stabilise slopes**: steel and wood bridges and snow barriers, wood tripods and snow nets. **Discover the innovative mono-anchorage type solution against avalanches: ACROSNOW®.**



Read more: www.acrosnow.com/en



Spotlight: **Aiguille du Midi**

The Compagnie du Mont-Blanc has initiated a vast programme **to redevelop the quality and layout of the summit station of the Aiguille du Midi aerial tramway.**

The objective was to improve the quality of the visitor's experience on the site, especially concerning the accessibility of mobility impaired people. The work planned on the site by our teams was carried out with special attention **paid to protect, promote and enhance this popular tourist site**, whose appeal is related to its status as an exceptional natural site.

Work performed

- ✦ Create **an area to congregate** on the summit terrace
- ✦ Redevelop the Mont-Blanc wing and **renovate its facade and roof**
- ✦ **Renovate the facade and roof** of the South return passageway
- ✦ **Réfection façade et toiture** de la coursière retour sud
- ✦ **Expand the terrace** on Piton Nord
- ✦ **Expand** the Piton Central's **lift cage**



“ACRO BTP has **all the necessary tools** to work at **high altitude.**”

Read more: www.acro-btp.fr/en

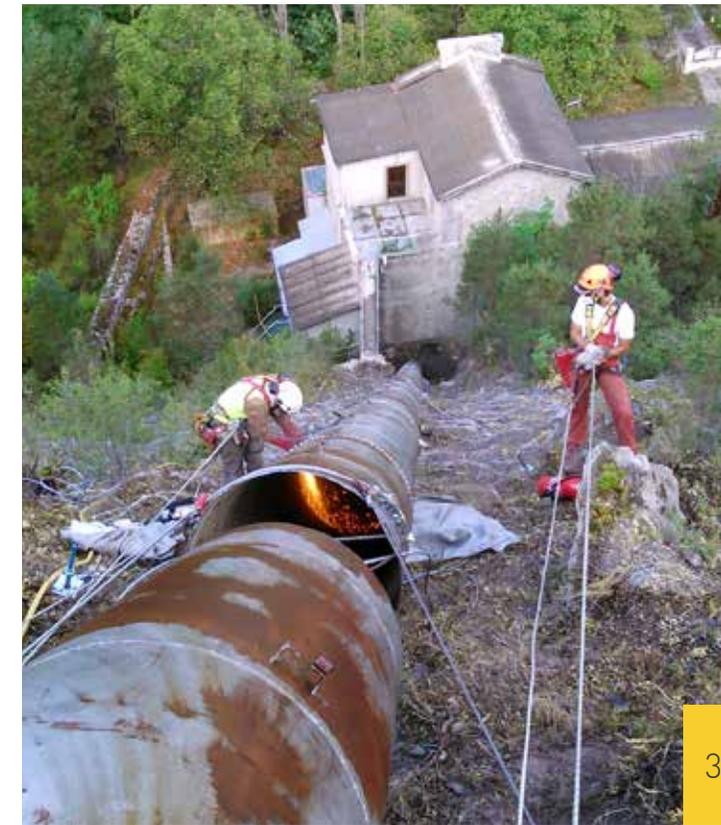




URBAN

Urban works

ACRO BTP is frequently approached for projects in urban settings, especially when the methods traditionally used are too costly for the volume of work to do. **The intervention of a rope access technician is often the only possible solution** based on the constraints of the location and its environment. Our fleet of heavy equipment and our experience let us **adapt to any situation**, which gives us lots of flexibility to satisfy your needs.



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Applications

- ★ Maintenance of GDF unloading arms
- ★ Window cleaning
- ★ Assembling metal structures
- ★ Dismantling chimneys
- ★ Sanding and painting pylons
- ★ cleaning and restoring facades
- ★ Work on roofs
- ★ And much more...



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