



Consejo Superior de Colegios
de Ingenieros de Minas



Colegio Oficial de Ingenieros
de Minas del Centro de España

XV INTERNATIONAL CONGRESS ON ENERGY AND MINERAL RESOURCES

NOVEMBER 22-24th, 2023

www.congresominerialeon.org



XV INTERNATIONAL CONGRESS OF
ENERGY AND MINERAL RESOURCES

LEÓN
2023
NOVEMBER 22-24

Congress Official
Magazine

rocas
y minerales

The 15th International Congress on Energy and Mineral Resources will take place in **León in November** and will bring together more than 400 professionals/150 companies, students, and technicians from the sector that will address issues of common interest.

OBJECTIVES FOR THE 15TH CONGRESS ON ENERGY AND MINERAL RESOURCES

The Higher Council of Mining Engineer Associations of Spain has entrusted the organization of the 15th Congress of Energy and Mineral Resources to be held in November 2023, in the city of León, to the Official Association of Mining Engineers of the Center of Spain (COIMCE).

The COIMCE proudly accepted this important challenge for the profession of Mining and Energy Engineers, and intends to achieve the following priority objectives of the Congress:

- 1) Disseminate and publicize Energy and Mineral Resources as a whole, to society; and for this purpose, the phrase “Working for Society” has been chosen as the motto and “leitmotif” of the Congress.
- 2) Energy and the treatment and management of Mineral Resources are essential activities for society. Energy is a central element of development. With this, investments, innovation, and new technologies that are the engines of job creation and growth for society become possible. Minerals and mineral raw materials are necessary and essential elements for improving the quality of life of citizens.
- 3) It is the task of this Congress to give its own place to mineral resources and mining in general in the planning of the territory, highlighting the need for land use, and at the same time, its temporary nature. For this, the first and most important step would be to facilitate the recognition of mineral resources and then have them taken into account in the land-use planning models.
- 4) It is necessary and vital to convey to society the economic importance and environmental sustainability of the Energy sector in all its forms and of Mineral Resources as a whole, highlighting both Energy and these Mineral Resources as a source of wealth and employment.
- 5) The dissemination action of our day to day in Energy and Mineral Resources to society, is a great challenge. There is no point in creating a very good industry in Energy and Mineral Resources if it is not conveyed to the whole of society and it comes to understand it. We must reach public opinion at all levels. We, the scientific community, have the obligation to raise awareness and reasonably disseminate and explain in terms that are accessible and that can reach all citizens, the issue of Energy as a whole, considering all forms of it, including new forms of energy, together with the management of mineral resources what would be the basic objective of this Congress, its dissemination within the Organization of this Congress. It is necessary to increase the information and proximity of citizens to Energy and Mineral Resources.

- 6) A very important value to highlight is social license, which was already defined in 1997 at an International Mining Congress in South America. License means asking permission to do something. And precisely, what has happened in recent years for Energy or Mineral Resources projects in Asia, Africa, America, Oceania, and even in Europe itself, is that when there is no social license, the projects do not move forward: there is a long list of projects that have been stuck indefinitely throughout the world. The concept simply exists; it has been created by the companies themselves, and if it is to be coherent, the concept has to become a concrete practice and not just institutional image discourse. Hence the importance of disseminating and publicizing our projects to society.
- 7) In the Rio de Janeiro Declaration (1992), in its principle #3, Sustainability was defined as meeting the needs of the present generations without compromising the possibilities of future generations to meet their own needs, balancing the environmental, social, and economic dimensions. Universal access to an affordable, reliable, and sustainable level of Energy (Sustainable Development Goal 7) is the focus of efforts to address climate change and reduce CO₂ emission limits.
- 8) The term social responsibility of organizations encompasses “compliance,” which is its basis, and good corporate governance which is “compliance,” with the relevant part of the laws and regulations and therefore also part of that responsibility. The term to refer to CSR or Sustainability is ESG, Environment, Social, and Governance (“Compliance”), where the G refers to good corporate governance. In fact, good corporate governance is “compliance” with relevant laws and regulations. It is an obligation to do outreach in our companies for these terms that are so important for the future of society.
- 9) In short, it is a matter of social risk, and knowing what risk society is capable of assuming that allows us to have a competitive industry in the field of Energy and Mineral Resources at the international level, to implement a social model and economic according development in accordance with the expectations generated by citizens and to give a clear signal of the role that the protection of the environment plays in the field of the work developed by Mining and Energy Engineers, increasing at all times and promoting communication initiatives with the groups potentially affected by the facilities.
- 10) The aspect of sustainability as a scale of the impact that the solutions presented along the way to solve the challenges of the future for Energy and Mineral Resources will have on society today and in the future play an increasingly important role.

**WE ENCOURAGE YOU TO BOOK YOUR CALENDARS FROM
NOVEMBER 22-24, 2023
TO ATTEND THE 15TH INTERNATIONAL CONGRESS
ON ENERGY AND MINERAL RESOURCES**



HONORARY COMMITTEE

Honorary President
His Majesty the King of Spain Felipe VI




CASA DE S. M. EL REY

CREDENCIAL

Nº 281/2022

Su Majestad el Rey, accediendo a la petición que tan amablemente Le ha sido formulada, ha tenido a bien aceptar la

PRESIDENCIA DE HONOR

del «**XV CONGRESO INTERNACIONAL DE ENERGÍA Y RECURSOS MINERALES**» que, bajo el lema *Trabajando para la sociedad*, tendrá lugar en León del 22 al 24 de noviembre de 2023.

Lo que me complace participarle para su conocimiento y efectos.

PALACIO DE LA ZARZUELA, 26 de noviembre de 2022

EL JEFE DE LA CASA DE S.M. EL REY,





SEÑOR DECANO-PRESIDENTE DE LA ASOCIACIÓN NACIONAL DE INGENIEROS DE MINAS Y DEL CONSEJO SUPERIOR DE COLEGIOS DE INGENIEROS DE MINAS DE ESPAÑA.

MADRID



Ángel CÁMARA RASCÓN

*President of the National Association
of Mining Engineers*

The National Association of Mining Engineers, along with the Official Association of Mining Engineers of the Center of Spain, are pleased to present the 15th International Congress on Energy and Mineral Resources that, under the motto of "Working for Society," will take place in León in November of this year.

The selection of the Congress motto shows the commitment mining engineering to everything that implies innovation and development to reaching greater well-being of society as a whole. The thematic areas that have been chosen as the guiding thread of the Congress will allow for presenting the technological advances in matters as diverse as mining, energy, water, and environment, among others, which shows its own diversity.

The Honorary Presidency of the Congress has been offered to His Majesty King Felipe VI who has already held it in previous editions, and who will lead a long list of personalities from different administrations as well as from the business sector and renowned specialists that are evidence of the high expectations of participation that are expected.

We can all do our part to ensure that this 15th Congress becomes a benchmark for the quality of its communications and the number of attendees. See you in León in November.



Alfonso VÁZQUEZ VARELA DE SEIJAS

Dean of the Official Association of Mining Engineers of the Center of Spain

After three years of global paralysis due to the pandemic, and after the return to the so-called “normality”, the Official College of Mining Engineers of the Center decided, in the Governing Board, to resume the organization of the XV International Congress of Energy and Resources Minerals, scheduled for 2020.

The Congress will be held in León, a city with a long mining and energy tradition, an excellent hotel and gastronomic offer, which welcomes its visitors, also offering diverse and interesting cultural and leisure activities.

The crisis of essential mineral raw materials for economic and technological development, together with the energy crisis, leads mining engineers to seek solutions and promote the development of new energy sources.

For this reason, this Congress represents a great opportunity for us to publicize the different advances in these sectors.

We thank the Scientific and Organizing Committees, as well as public and private entities, organizations and professionals, for their effort and experience, to ensure that the XV International Congress of Energy and Mineral Resources is the meeting point between professionals, suppliers and consumers of the different sectors.

Enjoy Leon!

"Working for the Society"

HONORARY COMMITTEE

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Mayor of León	■ José Antonio Díez Díaz
President of the National Association of Mining Engineers	■ Ángel Cámara Rascón
Dean of the Official Association of Mining Engineers of the Center of Spain	■ Alfonso Vázquez Varela de Seijas

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- **Patxi Elorza Tenreiro**
- **David Fernández López**



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THEMATIC AREAS

01 MINING AND MINERALURGY

- 01-1 Exploration and Research
- 01-2 Underground mining
- 01-3 Open pit mining and ground engineering
- 01-4 Metal mining
- 01-5 Mining of aggregates and other non-metallic minerals
- 01-6 Machinery
- 01-7 Mineralurgy and treatment plants
- 01-8 Explosives

02 METALLURGY, STEEL AND NEW MATERIALS

- 02-1 Innovation in metallurgical and steel processes
- 02-2 Metallurgy of new materials
- 02-3 Metal recycling

03 ENERGY

- 03-1 Nuclear energy. Fission, new developments in fusion, and management and treatment of radioactive waste
- 03-2 Thermal energy. Coal, gas, and oil. Utilization, processing, transport, and management
- 03-3 Renewable energies. Wind, photovoltaic, thermosolar, hydraulic, mini-hydraulic, and others
- 03-4 Energy efficiency
- 03-5 Storage, transport and distribution of energy. Hydrogen.

04 ENVIRONMENT

- 04-1 Air and water conditions. Examples of success
- 04-2 Effects on flora and fauna. Environmental risk management
- 04-3 Prevention of conditions and restoration of the environment
- 04-4 CO₂ capture, use, and storage Climate change
- 04-5 Environmental legislation and training

05 WATER

- 05-1 Superficial and underground waters. Use and water security, improvement of efficiency and digitization, aquatic ecosystems and climate change
- 05-2 Regenerated and desalinated water. Technologies, use, and integration in water management
- 05-3 Research, protection, and development of mineral and thermal water
- 05-4 Water in mining. Challenges and benefits

06 ENGINEERING CHALLENGES

- 06-1 Digitalization
- 06-2 Social acceptance of mining, energy, and industry
- 06-3 University training and international accreditation
- 06-4 Health and safety in mining, industry and construction sites

07 STRATEGIC RESOURCES

- 07-1 Mineral resources for the industry of the 21st century
- 07-2 New sources of energy. Economy and reliability
- 07-3 Geostrategy of mineral and strategic resources

TECHNICAL PROGRAM

November 2023

	WEDNESDAY 22				THURSDAY 23				FRYDAY 24				SATURDAY 25	
9:00 h	Registration				SESSION 3 MADRID HALL	SESSION 4 CASTILLA Y LEÓN HALL	SESSION 4 EXTREMADURA HALL		SESSION 5 MADRID HALL	SESSION 6 CASTILLA Y LEÓN HALL	SESSION 7 EXTREMADURA HALL		TECHNICAL VISIT	
10:00 h	INAUGURATION AND INAUGURAL CONFERENCE											Roundtable 5 AUDITORIUM ROOM		
11:00 h									Coffee					
12:00 h	Coffee				Coffee									
13:00 h	SESSION 1 MADRID HALL	SESSION 2 CASTILLA Y LEÓN HALL	SESSION 2 EXTREMADURA HALL	Roundtable 1 AUDITORIUM ROOM	SESSION 3 MADRID HALL	SESSION 4 CASTILLA Y LEÓN HALL	SESSION 4 EXTREMADURA HALL	Roundtable 3 AUDITORIUM ROOM	SESSION 5 MADRID HALL	SESSION 6 CASTILLA Y LEÓN HALL		Roundtable 6 AUDITORIUM ROOM		
14:00 h									CLOSING					
15:00 h	Opening Cocktail				Lunch Buffet				Closing Cocktail					
16:00 h	SESSION 3 MADRID HALL	SESSION 2 CASTILLA Y LEÓN HALL	SESSION 2 EXTREMADURA HALL		SESSION 3 MADRID HALL	SESSION 4 CASTILLA Y LEÓN HALL	SESSION 4 EXTREMADURA HALL	SPECIAL SESSION						
17:00 h														
18:00 h				Roundtable 2 AUDITORIUM ROOM				Roundtable 4 AUDITORIUM ROOM						

- SESSION 1 - METALLURGY, STEEL AND NEW MATERIALS. **Area 02** - MADRID HALL
- SESSION 2 - ENGINEERING CHALLENGES. **Area 06** - Sala CASTILLA Y LEÓN. EXTREMADURA HALL
- SESSION 3 - ENVIRONMENT. **Area 04** - MADRID HALL
- SESSION 4 - MINING AND MINERALURGY. **Area 01** - CASTILLA Y LEÓN HALL. EXTREMADURA HALL
- SESSION 5 - ENERGY. **Area 03** - MADRID HALL
- SESSION 6 - STRATEGIC RESOURCES. **Area 07** - CASTILLA Y LEÓN HALL
- SESSION 7 - WATER. **Area 05** - EXTREMADURA HALL
- Roundtable 1 - "ROLE OF WOMEN IN MINING AND ENERGY OF THE 21ST CENTURY". Wednesday 22
- Roundtable 2 - "SOCIOLOGICAL IMPACT OF MINING IN SPAIN". Wednesday 22
- Roundtable 3 - "DIGITALIZATION". Thursday 23
- Roundtable 4 - "RAW MATERIALS ROADMAP". Thursday 23
- Roundtable 5 - "IS AN ENERGY MIX POSSIBLE IN SPAIN WITHOUT NUCLEAR AND COAL?". Fryday 24
- Roundtable 6 - "MINE WATER VALUATION, RECOVERIES". Fryday 24

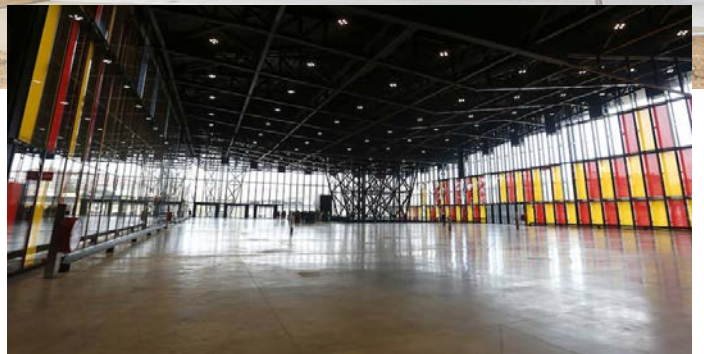
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CONGRESS VENUE

The place chosen to hold the congress is the Exhibition and Convention Center of LEÓN.

The Center has a large total area of 11,000 m² with sufficient parking and a perfect location right next to the high-speed train station, and just a 10-minute walk from the center, crossing the bridge over the river Bernesga to access the Avenida de Ordoño II and the city center. From there, in just a few minutes you can visit the historical and interesting places of León.



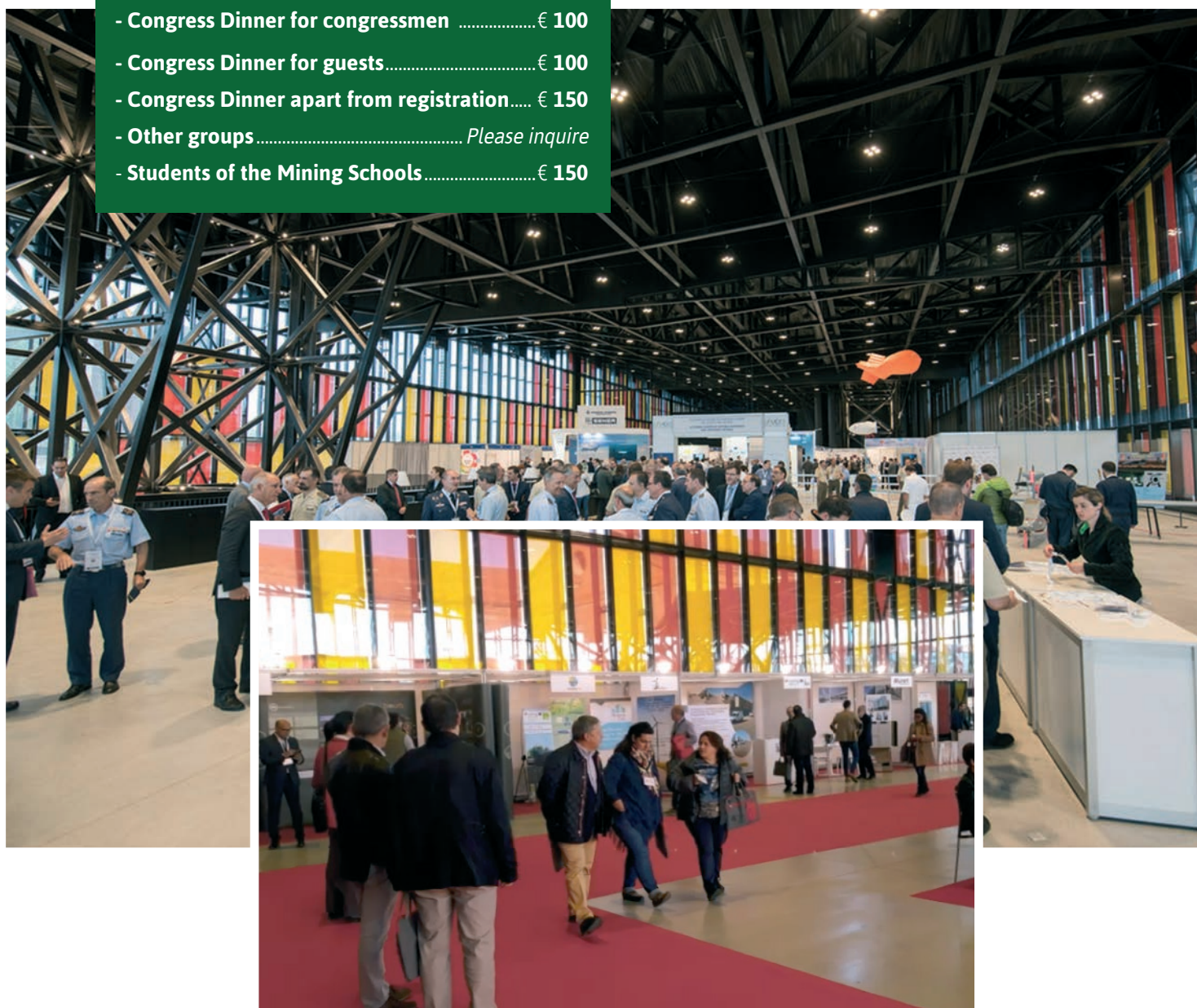
REGISTRATION (Congress dinner not included)

- Early registration € 450
(Before July 1st, 2023)
- Normal registration € 565
(From July 2nd to October 29th, 2023)
- Registration with surcharge € 700
(From October 30th, to November 22nd, 2023)
- Unemployed people € 250

OTHERS

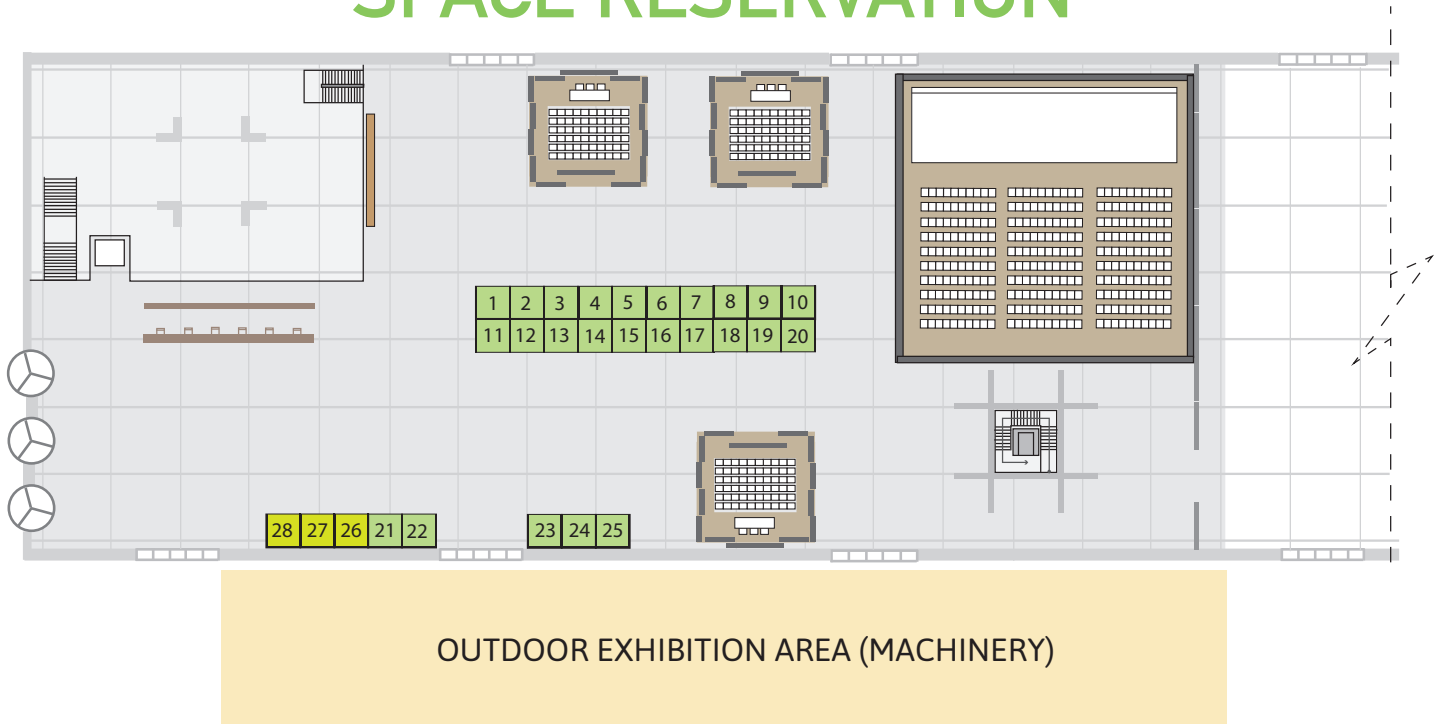
- Congress Dinner for congressmen € 100
- Congress Dinner for guests € 100
- Congress Dinner apart from registration..... € 150
- Other groups Please inquire
- Students of the Mining Schools € 150

REGISTRATION FEES



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SPACE RESERVATION



■ Standard Stand 3x3 m

Only space reservation

(3x3 m) 9 m² = € 2,500 + VAT

Standard stand (space + modular stand)

(3x3 m) 9 m² = € 4,000 + VAT (2.5 m high)

Special spaces available upon request

The modular stand rates include the following services:

- Exhibition carpet
- Aluminum profile and white melamine sheets
- Company signage on the 32 cm high front
- General stand lighting
- Maximum two-phase panel of 2,100 W (power of the connection).
- A plug
- 10 Invitations and exhibitor for Stand contracted + 1 registration with Formal Dinner
- Daily stand cleaning
- Mandatory insurance

SPONSORSHIP MEDALS

GOLD

€ 7,500 + VAT



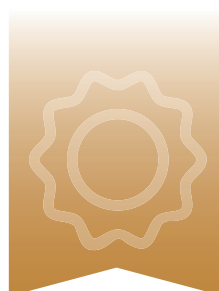
SILVER

€ 5,000 + VAT



BRONZE

€ 3,000 + VAT



CERTIFICATION

€ 2,000 + VAT



Gold Sponsor Benefits

- Interview on the Congress website with a manager
- Banner on the Congress bulletins
- Sponsorship promotion on Congress social networks
- Logo incorporation on posters and promotional material
- Six registrations for the Congress (2 of them with the right to Formal Dinner)
- Preferred logo on the website



Silver Sponsor

- Banner on the Congress bulletins
- Sponsorship promotion on Congress social networks
- Logo incorporation on posters and promotional material
- Three registrations for the Congress (1 of them with the right to Formal Dinner)
- Preferred logo on the web



Bronze Sponsor

- Sponsorship promotion on Congress social networks
- Logo incorporation on posters and promotional material
- Two registrations for the Congress
- Logo on the website



Benefits of Certification

- Logo incorporation on posters and promotional material
- One registration for the Congress
- Logo on the website

"Working for the Society"

SPONSORSHIP OF SPECIFIC ACTIVITIES

- STEM session	3.000 €
- Wi-Fi	2.000 €
- Attendee's Backpack/Bag	
Exclusive	6.000 €
Shared	3.500 €
- "Safety Minute" at the beginning of the Congress	3.000 €
- CO ₂ footprint monitoring	4.000 €
- Welcome cocktail Wednesday, 22	6.500 €
- Lunch Thursday, 23	8.000 €
- Farewell cocktail Friday, 24	5.000 €
- Coffee Thursday or Friday	2.000 €
- Cocktail for the gala dinner	10.000 €



Other sponsors, please inquired
comercial@congresominerialeon.org
91 373 47 50



TECHNICAL VISIT

The technical visit will take place on **Saturday, November 25th**.
The destination is the **Santa Bárbara Mine of the Santa Bárbara Foundation**
of the Community of Castilla y León.

The headquarters of the Foundation are located in the province of León, in the Bierzo region, between the municipalities of Folgoso de la Ribera and Torre del Bierzo, in the center called *Escuela Laboral del Bierzo*, or traditionally as it is known. **Bierzo mine-school**.

To sign up for this (free) activity, a registration will be opened on the Congress website. Until full capacity is reached.





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