

**DEPARTMENT OF MINING ENGINEERING  
DEPARTMENT REPORT**

**(01.09.2005 – 31.07.2006)**

**1. The Number of Academic and Administrative Staff : 45**

Prof : 10  
Assoc. Prof : 1  
Assist. Prof : 3  
Instructor : 3  
Res. Assist. : 20  
Technical : 4  
Administrative : 3

**A. Assignments**

**a) from other institution and universities:**

2 persons in fall of 2005/2006  
1 person in summer of 2005/2006

**b) Academics who are assigned abroad (short-long term):**

Prof. Dr. Zafir EKMEKÇİ	15 February – 8 March 2006	Australia
Prof. Dr. Ş.Levent ERGÜN	9 – 15 May 2006	Germany
Assoc.Prof. Özcan Y.GÜLSOY	9 – 15 May 2006	Germany
Assist. Prof. M.Ali HİNDİSTAN	23 – 29 May 2006	Albania
Res. Assist. Özlem BIÇAK	1 September – 30 November 2005	South Africa
Res. Assist. Esra BAĞCI	1 September – 30 November 2005	South Africa
Res. Assist. Ömürden GENÇ	8 July 2005 – 8 January 2006	Mexico
	4 – 12 March 2006	Australia
Res. Assist. A.Seyfi ERDEM	20 February – 29 September 2006	Poland
Res. Assist. Can E.ÖZER	15 June 2006 – 15 June 2007	Australia

**2. Educational Activities**

**a) Average number of Students and Course hours per a year (in undergraduate level)**

	<b>(Departmental course) Course hour</b>	<b>Number of Students</b>
<b>Fall</b>	92 (Weekly)	224
<b>Summer</b>	86 (Weekly)	229
<b>Total</b>	<b>178</b>	<b>453</b>

**b) Total Number of Students:**

	<b>Preparatory</b>	<b>Undergraduate</b>	<b>Postgraduate</b>	<b>Total</b>
<b>Fall</b>	60	224	68	352
<b>Summer</b>	50	229	64	343

**c) The number of graduates in 2005/2006 :** FALL : 5  
SPRING: 24  
SUMMER: 2

### 3. Academic Activities

#### A. Books

#### B. Articles

##### • Articles : 3+15

ÇETİNER E.G., Ünver B., Hindistan M.A., 2006, Maden atıkları ile ilgili mevzuat: Avrupa Birliği ve Türkiye, Madencilik, 45, 1, 23-34. (in Turkish)

ERDEM, S., Ergün L.Ş., Benzer H., 2005, Modelleme Yardımıyla Çimento Öğütme Devresi Tasarımında Morrell Ve Mann Yönteminin Sınanması, Madencilik Dergisi, 44, 4, 3-17. (in Turkish)

OBUT, A., Girgin İ., 2005, Magnezyum, Kurşun ve Manganez İyonlarının Bentonit Süspansiyonlarının Jelleşme Karakteristiği Üzerindeki Etkisi, Madencilik, 44, 2, 17-24. (in Turkish)

##### • Articles in Foreign language: 15

BRADSHAW, Dee J., Mark A. Buswell, Peter Harris, Zafir Ekmekçi, Interactive Effects of the Type of Milling Media and CuSO<sub>4</sub> Addition on the Flotation Performance of Sulphide Minerals From Merensky Ore Part I: Pulp Chemistry, Int.J.Min.Proc., 78, 2006, 164-174.

ÇELİK İlkey Bengü, Öner Muammer, The Influence of Grinding Mechanism on the Liberation Characteristics of Clinker Minerals, Cement and Concrete Research, February 2006, 6s

EKMEKÇİ, Zafir, Dee J. Bradshaw, Peter Harris, Mark A. Buswell, Interactive Effects of the Type of Milling Media and CuSO<sub>4</sub> Addition on the Flotation Performance of Sulphide Minerals From Merensky Ore Part II: Froth stability, Int.J.Min.Proc., 78, 2006, 164-174.

GÜLER, Taki, Cahit Hiçyılmaz, Gülsün Gökağaç, Zafir Ekmekçi, Adsorption of Dithiophosphate and Dithiophosphinate on Chalcopyrite, Minerals Engineering, 19, 2006, 62-71.

GÜLSOY, Özcan Y, Kademli, M, Effects of Operational Parameters of Spiral Concentrator on Mica–Feldspar Separation, Mineral Processing and Extractive Metallurgy (Trans. Inst. Min Metall. C) . 2006, Vol: 115, No: 2

GÜLSOY, Özcan Y., A simple Model For the Calculation of Entrainment in Flotation, The Korean J. of Chem. Eng. 2005, 22 (4), 628-634

OBUT, Abdullah, Sedimentation Characteristics of Kaolin and Bentonite in Concentrated Solutions, Acta Montanistica Slovaca, 2005, 10, Special Issue, 145-150.

ÖZER, Can Ekin, Ergün, Ş.L., Benzer, H., Modeling of the Classification Behavior of the Diaphragms Used in Multi-Chamber Cement Mills, Int. J. Miner. Process. 2006, vol. 80, 58–70.

TERCAN, A.Erhan, Y. Özçelik. Canonical Ridge Correlation of Mechanical and Engineering Index Properties, International Journal of Rock Mechanics and Mining Sciences, Vol. 43.(2006) pp.58-65

TİRYAKİ, Bülent, Evaluation of the Indirect Measures of Rock Brittleness and Fracture Toughness in Rock Cutting, The Journal of the South African Institute of Mining and Metallurgy, 2006, Vol. 106, Issue 6, pp. 1-17.

TİRYAKİ, Bülent, Dikmen, A.C., Effects of Rock Properties on Specific Cutting Energy in Linear Cutting of Sandstones by Picks, Rock Mechanics and Rock Engineering, Vol. 2006, 39, No. 2, pp. 89-120.

TİRYAKİ, Bülent, Practical Assessment of the Grindability of Coal Using its Hardness Characteristics, Rock Mechanics and Rock Engineering, 2005, Vol. 38, No. 2, pp. 145-151.

ÜNVER, Bahtiyar, Yasitli N.E., Modelling of Strata Movement With a Special Reference to Caving Mechanism in Thick Seam Coal Mining, International Journal Of Coal Geology, 66 (4): 227-252 Apr 3 2006

YAŞITLI, NE, Unver B., Numerical Modelling of Stresses Around a Longwall Panel With Top Coal Caving, Journal Of The South African Institute Of Mining And Metallurgy, 105 (5): 287-300, 2005

**The number of articles published in SCI journals:14**

### **C. PAPERS**

#### **• National Papers : 3**

KULAKSIZ, S., Bazı Doğal Taşlarda Görülen Yapı-Doku Düzensizlikleri ve Asgariye İndirilmesi, Türkiye V. Mermer ve Doğaltaş Sempozyumu Bildiriler Kitabı, Afyon, Ed. Metin Ersoy ve Ertuğrul Ergün, s.199-210 (in Turkish)

ÖZÇELİK, Y., Bayram, F., Yaşıtlı, N.E., Yılmazkaya, E., Kanbir, E., Hanecioğlu, B., Bektaşoğlu İ., Ergul, A., Gürsel, M., Elmas Telli Kesmede Kasnak Devir Hızının Kesme Performansına Etkisinin İncelenmesi, Mermer ve Doğaltaş Sempozyumu, 2006, s.219-228 (in Turkish)

ÖZÇELİK, Y., Bayram, F., Model Elmas Telli Kesme Makinasının Oluşturulması, Mermer ve Doğaltaş Sempozyumu, 2006, s.241-250 (in Turkish)

#### **• International Papers : 8**

BENZER, Hakan, Ergün L., Jankovic A., 2005 “Cement Clinker Grinding Practice and Technology”, SME Annual Meeting 27-29 Mart 2006 St. Louis

GENÇ, Ömürden, Benzer H., “Direct Calculation of Breakage and Discharge Rates of Particles in dry Grinding Ball Mills” –, JKMR International Student ConferenceII 2006, 2-3 March, Brisbane

TÜTMEZ, Bülent, A.E.Tercan (2005) , "Estimation of Trona Grade by Fuzzy Modelling", Computational Intelligence Methods & Applications, CIMA2005, İstanbul, 2005.

**The number of Msc and PhD Theses supervised :**

- a) MSc: 43
- b) PhD: 21

**The Number of Projects Conducted :**

**a) National : 13**

BENZER, H., Performance Evaluation and Optimization Studies at the Grinding Circuits of Cimsa Mersin and Kayseri Plants

BENZER, H., Investigation of the Possible Capacity Improvement by Using the High Pressure Grining Rolls at Ozgur Beton Grinding Plant

CENGİZ, K., The Investigation of Subballast Materials Physical and Mechanical Properties for Ankara-Eskisehir High Speed Line Project, (Hacettepe Üniversitesi, Maden Mühendisliği Bölümü-OHL-ALSİM ALARKO)

CENGİZ, K., Concrete support design for underground openings, (H.Ü. Bilimsel Araştırmalar Birimi Projesi, Proje No: 02 02 602 011-in progress)

EKMEKÇİ, Z., The Use of Machine Vision System to Relate Froth Characteristics to Changes in Pulp Chemistry, (TÜBİTAK, MİSAG-248)

EKMEKÇİ, Z., Beneficiation of Lahanos Complex Cu-Zn Sulphide Ore, (DEMİR EXPORT A.Ş.)

EKMEKÇİ, Z., Adsorption of Polysaccharide Type Depressants on Sulphide Minerals and Their Effects on Flotation, (Hacettepe Üniversitesi, Bilimsel Araştırmalar Birimi, Proje No: 0401602002)

EKMEKÇİ, Z., The use of polysaccharides in flotation of sulphide minerals, (TÜBİTAK, 104M361)

ERGÜN, L., Evaluation of the Performance of the Re grinding Circuit in Çayeli Concentrator and Investigation of Stirred Ball Mill Application to Increase the Copper and Zinc Recovery(ÇBİ- in progress)

ERGÜN, L., Modelling of Bigadiç Boron Concentrator (Eti Maden İşletmeleri Genel Müdürlüğü)

ERGÜN, L., Investigation of Applicability of Optical Sorting to Hüsamlar Coal (TKİ- in progress)

ERGÜN, L., Modelling and Simulation Aided Design of Coal Preparation Plant for Industry's Use at GLİ, (TKİ- in progress).

KULAKSIZ, S., Industrial Raw Materials Development Laboratory, (Hacettepe Üniversitesi Bilimsel Araştırmalar Birimi)

**b) International : 2**

TİRYAKİ, B., Measurement and Prediction of Cutting Forces and Vibrations on Longwall Shearers

TİRYAKİ, B., Investigation of Optimum Maintenance and Production Practices for Underground Coal Mining Equipment,

**D. Scientific Meetings that academicians of the department join**

20-24 February 2006, “Electrochemistry of Sulphide Minerals: Comminution and Flotation”, University of Queensland, JKMRRC , Avustralya.

3rd International Conference on “Mineralurgy and Environmental Technologies”. Herľany, Slovakia.

Coal Congress, Zonguldak, Turkey.

International Mining Congress and Fair of Turkey, Izmir.

JKMRRC International Student Conference, Feb. 2005, Brisbane, Australia.

Prof.Dr. A.Erhan TERCAN  
Bölüm Başkanı