Total Foundrymen Control

19th INTERNATIONAL FOUNDRYMEN CONFERENCE

Humans - Valuable Resource for Foundry Industry Development Split, June 16th-18th, 2021

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University of Zagreb Faculty of Metallurgy Sisak, Croatia



University of Ljubljana
Faculty of Natural Sciences and Engineering
Ljubljana, Slovenia



University North Koprivnica, Croatia



Technical University of Košice
Faculty of Materials, Metallurgy and Recycling
Košice, Slovakia



University of Split
Faculty of Chemistry and Technology
Split, Croatia



ELKEM AS Norway



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PROGRAMME

Split, June 16th – 18th, 2021

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WEDNESDAY / June 16 th , 2021		
17:00 – 18:00	REGISTRATION OF PARTICIPANTS NEXT TO AMPHITHEATER A02	
18:00 - 19:00	CONFERENCE OPENING FACULTY OF CHEMISTRY AND TECHNOLOGY: AMPHITHEATER A02 (GROUND FLOOR OF III FACULTY BUILDING) (ADDRESS: RUĐERA BOŠKOVIĆA 33 - ENTRANCE ON GROUND FLOOR – SOUTH, SPLIT)	
SPECIAL PLENARY LECTURES SECTION Moderators: Coorganizers' Representatives		
19:00 – 19:45	<u>Luka Čadež</u> MORE THEN A MANUFACTURER - BRODOSPLIT	
20:00 – 23:00	WELCOME COCKTAIL THE VASKO LIPOVAC UNIVERSITY GALLERY (ADDRESS: RUĐERA BOŠKOVIĆA 31, SPLIT)	

THURSDAY / June 17 th , 2021			
08:00 - 09:00	REGISTRATION OF PARTICIPANTS NEXT TO AMPHITHEATER A02		
SPECIAL PLENARY LECTURES SECTION Moderators: Zdenka Zovko Brodarac, Gordana Gojsević Marić, Jožef Medved			
09:00 – 09:45	Denisa Anca, Mihai Chisamera, Stelian Stan, <u>Iulian Riposan</u> SOLIDIFICATION PATTERN OF HIGH-SI DUCTILE IRON CASTINGS IN THE PRESENCE OF MOULD COATINGS WITH S OR O CONTENT AND WITH OR WITHOUT PROTECTIVE AGENTS FOR THEIR DIFFUSION INTO THE IRON MELT		
9:45 – 10:30	Doru M. Stefanescu, Gorka Alonso, Ramon Suarez NUCLEATION AND CRYSTALLIZATION OF SPHEROIDAL GRAPHITE IN CAST IRON		
10:30 – 10:40	COMMERCIAL PRESENTATION GOLDEN SPONSOR – LABTIM ADRIA d.o.o., Zagreb (HR)		



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	THURSDAY / June 17 th , 2021		
INVITED LECTURE			
Moderators: Zden	nka Zovko Brodarac, Gordana Gojsević Marić, Jožef Medved		
10:40 – 11:00	Varužan Kevorkijan MICROSTRUCTURE AND FORMABILITY DEVELOPMENT IN AI STRIP CASTING FOR QUALITY - DEMANDING FOIL PRODUCTION		
11:00 – 11:20	Sonja Jozić SEMI - SOLID METAL PROCESSING; CHALLENGES AND INOVATIONS		
11:20 – 11:50	COFFEE BREAK		
	S & ORAL PRESENTATION SECTION ižan Kevorkijan, Primož Mrvar		
11:50 – 12:10	Jožef Medved, Maja Vončina, Stanislav Kores, Matej Mesarič PRINCIPLE OF TITANIUM DIOXIDE REDUCTION IN LIQUID ALUMINIUM		
12:10 – 12:25	Mitja Petrič, Bastri Zeka, Tilen Balaško, Primož Mrvar, Boštjan Markoli PRODUCTION AND CASTING OF AlSi7MgLi ALLOY		
12:25 – 12:45	Iveta Vasková, Petra Delimanová, Martina Hrubovčáková, Marianna Bartošová BENTONITE – ECOLOGICAL BINDING MATERIAL OF FIRST GENERATION AND ITS USING IN FOUNDRY		
12:45 – 12:55	COMMERCIAL PRESENTATION GOLDEN SPONSOR – COMET d.o.o., Novi Marof (HR)		
INVITED LECTURES & ORAL PRESENTATION SECTION Moderators: Varužan Kevorkijan, Primož Mrvar			
12:55 – 13:15	<u>Dražan Kozak</u> , Katarina Monkova, Darko Damjanović, Marina Franulović, Jerzy Józwik, Katarina Pisačić EXPERIMENTAL AND NUMERICAL ANALYSIS OF PRINTED LATTICE STRUCTURE		
13:15 – 13:30	Jure Krolo, Ivana Dumanić, Sonja Jozić, Branimir Lela INFLUENCE OF SEMI-SOLID METAL PROCESSING AND ARTIFICIAL		



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THURSDAY / June 17 th , 2021					
	AGING ON MICROSTRUCTURE AND HARDNESS OF THE AlSi9Cu3(Fe)				
13:30 – 13:50	Vladimír Krutiš, Václav Káňa, Marek Dostál, Jarmil Cileček EFFICIENT METHOD OF MANUFACTURING DEMANDING PROTOTYPE CASTINGS USING INVESTMENT CASTING TECHNOLOGY				
13:50 – 15:00	CONFERENCE LUNCH OUTSIDE OF III FACULTY BUILDING (IN FRONT OF THE MAIN ENTRANCE)				
INVITED LECTURES & ORAL PRESENTATION SECTION Moderators: Dražan Kozak, Iveta Vaskova					
15:00 – 15:20	Primož Mrvar, Milan Terčelj, Mitja Petrič, Danijel Mitrović, Goran Kugler DAMAGE ANALYSIS OF COMPACTED GRAPHITE CAST IRON				
15:20 – 15:35	Branko Bauer, Ivana Mihalic Pokopec, Marko Šaban EFFECT OF HIGH SILICON CONTENT ON THE PROPERTIES OF DUCTILE IRON CASTINGS				
15:35 – 15:55	Hasan Avdušinović, Almaida Gigović - Gekić, Šehzudin Dervišić INFLUENCE OF ELEVATED WORKING TEMPERATURES ON MECHANICAL PROPERTIES OF AUSTEMPERED DUCTILE IRON				
16:00 – 17:00	POSTER SECTION COFFEE BREAK IN FRONT OF AMPHITHEATER A02				
17:00 – 18:30	LABORATORIES VISIT Moderators: Faculty of Chemistry and Technology: Dražan Jozić, Franko Burčul Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture: Jure Krolo, Zvonimir Dadić				
21:00 –	CONFERENCE GALA DINNER, RESTAURANT GUSAR ADDRESS: SPINUTSKA 69, SPLIT				

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	FRIDAY / May 18 th , 2021	
09:00 - 11:30	WORK VISIT – BRODOSPLIT d.d. ADRESS: PUT SUPAVLA 19, 21000, SPLIT	
12:00 - 14:30	SPLIT SIGHTSEEING TOUR MEETING POINT: DIOCLETIAN'S PALACE PUBLIC MOCK-UP AT EAST SIDE OF THE SPLIT MAIN PROMENADE: https://goo.gl/maps/NAdbXaKKyLvTgSBp8	
15:00 - 16:15	CONFERENCE LUNCH STUDENT RESTAURANT "KAMPUS" (ADDRESS: CVITE FISKOVIĆA 3, SPLIT)	
	ES & ORAL PRESENTATION SECTION islav Lazić, Mario Nikola Mužek	
16:15 – 16:30	<u>Karlo Jurković</u> , Sebastjan Kastelic, Primož Mrvar, Branko Bauer APPLICATION OF COMPUTER SIMULATION FOR VERTICAL CENTRIFUGAL CASTING	
16:30 – 16:50	Dario Iljkić, Sunčana Smokvina Hanza, Božo Smoljan, Loreta Pomenić, Lovro Štic, Lovro Liverić LOAD CAPACITY AND CORROSION BEHAVIOR OF QUENCHED AND TEMPERED STEEL 42CrMo4 AND CAST STEEL GS-42CrMo4	
16:50 – 17:05	Barbara Tubić Bulat, Zdenka Zovko Brodarac, Primož Mrvar NUCLEATION AND GRAPHITE GROWTH IN NODULAR CAST IRON - AN OVEREVIEW	
17:05 – 17:25	<u>Dragan Manasijević</u> , Ljubiša Balanović, Ivana Marković, Milan Gorgievski, Uroš Stamenković, Kristina Božinović STRUCTURAL AND THERMAL PROPERTIES OF THE Sn-Zn ALLOYS	
17:25 – 18:00	COFFEE BREAK	
INVITED LECTURES & ORAL PRESENTATION SECTION Moderators: Dario Iljkić, Ladislav Vrsalović		
18:00 – 18:20	Irena Žmak, Ida Mujkić DEMAND, SUPPLY, ENERGY CONSUMPTION AND SUSTAINABILITY OF PRIMARY AND SECONDARY COPPER PRODUCTION	

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18:20 – 18:35	Almaida Gigović - Gekić, Hasan Avdušinović, Amna Hodžić, Dejana Kasapović
	INFLUENCE OF ANNEALING OF AUSTENITIC STAINLESS STEELS
	ON PITTING CORROSION RESISTANCE
	Ladislav Lazić, Martina Lovrenić-Jugović, Lorena Mrkobrada,
18:35 – 18:50	Željko Grubišić, Damijan Cerinski
16.55 - 16.50	POSSIBILITY OF ENERGY EFFICIENCY IMPROVING OF THE
	MELTING FURNACE IN SECONDARY ALUMINIUM PRODUCTION
	Vladimir Krutiš, <u>Martin Madaj</u> , Vlastimil Kolda
18:50 – 19:05	CO-DESIGN IN CASTING - A WAY TO ACHIEVE OPTIMAL DESIGN
	AND PRODUCTION OF CASTINGS
	<u>Dipak Ghosh</u>
19:05 – 19:20	MODERN ALPHASET (APNB)-REFINED FORMULATIONS WITH
	BETTER UNDERSTANDING OF CHEMISTRY
	Peter Hajduch, Mile B. Đurđević, <u>Srećko Manasijević</u>
19:20 – 19:35	IMPROVING THE MICROSTRUCTURE AND MECHANICAL
	PROPERTIES OF EN AC 43200 CAST ALUMINUM ALLOY
	MODIFIED WITH ZIRCONIUM
19:35 –	CONFERENCE CLOSING
	AMPHITHEATER A02

SPONSOR EXHIBITION			
17:00 – 18:00	WEDNESDAY /June 16 th 2021	EXHIBITION HALL	
09:00 – 17:00	THURSDAY / June 17 th , 2021	IN FRONT OF AMPHITHEATER	
15:30 – 19:35	FRIDAY / May 18 th , 2021	A02	



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POSTER SECTION / THURSDAY / June 17th, 2021, 16:00 – 17:00 IN FRONT OF AMPHITHEATER A02

Moderators: Martina Lovrenić-Jugović, Zvonimir Dadić
Authors should be available for presentation and individual talk on

Anita Bašić, Mario Nikola Mužek, Marija Ćosić, Sandra Svilović
THE COPPER ADSORPTION ON ZEOLITE NAX - THE IMPELLER LOCATION IMPACT

Sandra Brajčinović, Anita Begić Hadžipašić, Franjo Kozina

INHIBITORY EFFECT OF COMMERCIAL INHIBITOR VCI 379/611 ON CORROSION BEHAVIOR OF X153CrMoV12 TOOL STEEL FOR COLD WORK

Sandra Brajčinović, Anita Begić Hadžipašić

CORROSION RESISTANCE OF CEMENTING STEEL X19NiCrMo4

IN MEDIUM OF 5% NaOH AND 5% H₂SO₄

Anđela Čović, Pero Dabić, Damir Barbir

ACTIVITY ASSESSMENT OF PHOTOSENSITIVE DYES ANTHOCYANIN, RHODAMINE B, RUTHENIUM N3 AND RHODAMINE B+ANTHOCYANIN MIXTURE FOR APPLICATION IN SOLAR CELLS

Ivana Gabelica, <u>Lidija Ćurković</u>, Vilko Mandić, Mihone Kerolli Mustafa PREPARATION AND CHARACTERIZATION OF POROUS ALUMINA CERAMICS USING

Ivana Gabelica, **Lidija Ćurković**, Ivana Panžić

WASTE COFFEE GROUNDS (WCG)

RAPID MICROWAVE-ASSISTED SYNTHESIS OF Fe₃O₄/SiO₂/TiO₂ CORE-SHELL NANOCOMPOSITE

<u>Stanisław Gil</u>, Wojciech Bialik, Bolesław Machulec, Agnieszka Tomaszewska, Sławomir Kozłowski

IMPACT OF FeSi FERROALLOY CASTING CONDITIONS ON THEIR STRUCTURE AND GRAIN SIZE AFTER CRUSHING PROCESS

<u>Ivan Jandrlić</u>, Franjo Kozina, Tin Brlić, Milica Vučenović

INFLUENCE OF COLD REDUCTION ON THE STRUCTURE AND HARDNESS OF COLD DRAWN COPPER WIRE

<u>Sebastjan Kastelic</u>, Almir Mahmutovič, Matic Žbontar, Primož Mrvar, Mitja Petrič MAKING PROTOTYPE CASTING USING 3D PRINTING AND INVESTMENT CASTING

Angela Kapitanović, Lana Brkić, Helena Pintarić, Dajana Mikić, <u>Helena Otmačić</u> <u>Ćurković</u>

PREPARATION AND CHARACTERIZATION OF ARTIFICIAL PATINA ON BRONZE



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POSTER SECTION / THURSDAY / June 17th, 2021, 16:00 – 17:00 IN FRONT OF AMPHITHEATER A02

<u>Franjo Kozina</u>, Zdenka Zovko Brodarac, Ivan Jandrlić, Renato Jagustović ANALYSIS OF THE CRACK FORMATION IN ASIS M2 HIGH SPEED TOOL STEEL DURING UTILIZATION

<u>Stjepan Kožuh</u>, Ivana Ivanić, Semir Oraščanin, Aleš Nagode, Ladislav Vrsalović MICROSTRUCTURE AND MICROHARDNESS OF Cu-Al-Mn-Zr ALLOYS BEFORE AND AFTER HEAT TREATMENT

<u>Stjepan Kožuh</u>, Domagoj Kovačević, Ivana Ivanić, Borut Kosec, Mirko Gojić CHARACTERIZATION OF WELDED DUPLEX STAINLESS STEEL AFTER ANNEALING

Filipa Krželi, Irena Žmak, Milan Vukšić, Lidija Ćurković

RHEOLOGICAL PROPERTIES OF WATER-BASED ALUMINA SUSPENSIONS IN RECYCLING WASTE ALUMINA POWDER

Darko Landek, Lidija Ćurković, Ivana Gabelica

SIMULATION MODEL OF CONVENTIONAL SOLID STATE SINTERING OF Al_2O_3 CERAMICS

<u>Vaso Manojlović</u>, Željko Kamberović, Miroslav Sokić, Branislav Marković, Milorad Gavrilovski, Slobodan Radosavljević

IMPACT OF MOULD POWDER ON PHYSICOCHEMICAL PROPERTIES OF SLAG IN THE CONTINUOUS CASTING PROCESS

<u>Daniel Novoselović</u>, Stefanija Klarić, Francois Botha, Saša Gojković POSSIBILITIES OF ONLINE LABORATORY PRACTICALS IN TEACHING OF CASTING COURSES

Daniel Novoselović, Štefanija Klarić, Josip Cumin, Saša Štrbac

DETERMINATION OF RESIDUAL STRESSES IN STRESS LATTICE WITH SIMULATION SOFTWARE

Katarina Pantović Spajić, <u>Branislav Marković</u>, Miroslav Sokić, Mladen Bugarčić, Gvozden Jovanović, Vaso Manojlović, Ksenija Stojanović

CHEMICAL LEACHING OF SUBBITUMINOUS COAL FROM THE BOGOVINA - EAST FIELD (BOGOVINA BASIN, SERBIA) USING HYDROCHLORIC ACID

<u>Ladislav Vrsalović</u>, Senka Gudić, Verena Šućurović, Ivana Ivanić, Stjepan Kožuh, Mirko Gojić

CORROSION STUDY OF CUAINI ALLOY IN STIRRED H₂SO₄ SOLUTION

Anamarija Stoilova Pavasovic, Frano Barbir

PRELIMINARY STUDY ON TEMPERATURE DISTRIBUTION PATTERNS IN PEM FUEL CELLS

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POSTER SECTION / THURSDAY / June 17th, 2021, 16:00 – 17:00 IN FRONT OF AMPHITHEATER A02

Ivan Stojanović, <u>Ivan Cindrić</u>, <u>Lara Janković</u>, Daniela Rakela Ristevski EVALUATION OF INFRARED DRIED SOLVENT-BORNE COATINGS

Ivan Stojanović, **Anna Poropat**

ANTICOROSIVE TESTING OF ELECTROSTATIC POWDER COATING ON DIFFERENT ELECTRO-RESISTANCE WELD TYPES

Zrinka Švagelj, Vera Rede, Ivana Gabelica, <u>Lidija Ćurković</u>

EFFECT OF BINDER ADDITION ON THE RHEOLOGICAL BEHAVIOUR OF ALUMINA SUSPENSIONS

Nediljka Vukojević Medvidović, Ladislav Vrsalović, Teo Ugrina, Ivona Jukić ELECTROCOAGULATION AUGMENTED WITH NATURAL ZEOLITE — THE NEW HYBRID PROCESS FOR TREATMENT OF LEACHATE FROM COMPOSTING OF BIOWASTE



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STUDENT SECTION / FRIDAY / June 18th 2021

FACULTY OF CHEMISTRY AND TECHNOLOGY: LECTURE HALL E402 (IV FLOOR) (ADDRESS: RUĐERA BOŠKOVIĆA 35, SPLIT)

Moderator: Ivana Ivanić, Sandra Svilović

16:15 – 16:30	<u>Ivan Betlehem</u> , Matija Bušić PLASMA ARC WELDING OF STAINLESS STEELS			
16:30 – 16:45	Zvonimir Dadić, Zrinka Magazinović, Igor Ćulum THE IMPACT OF FURNACE ATMOSPHERE DURING QUENCHING OF C45E STEEL ON MICROSTRUCTURE, HARDNESS AND IMPACT TOUGHNESS			
16:45 – 17:00	<u>Petra Delimanová</u> , Iveta Vasková, Vladimír Šabík, Lukáš Fogaraš BINDER AS BASIC FACTOR IN CORES PRODUCED BY COLD BOX ON SURFACE QUALITY OF CASTING			
17:00 – 17:15	Vjeran Furlan, Anita Begić Hadžipašić ELECTROCHEMICAL INVESTIGATIONS OF CORROSION BEHAVIOR OF GRAY AND NODULAR CAST IRON IN THE MEDIUM OF ARTIFICIAL SEAWATER			
17:15 – 17:30	Antea Hrepić, Ivana Smoljko ALGAE – THE FUTURE OF CORROSION PROTECTION?			
17:30 – 18:00	COFFEE BREAK			
18:00 – 18:15	Radosna Jerčić, Ladislav Vrsalović ELECTROCHEMICAL BEHAVIOUR OF CuAlMnZn ALLOY IN NaCl SOLUTION			
18:15 – 18:30	Eldar Jusić, Ahmed Grahić, Nesib Jašarević, Almaida Gigović-Gekić EFFECT OF COOLING RATE AT MICROSTRUCTURE AND HARDNESS OF STEEL 42CrMo4			
18:30 – 18:45	Josipa Šarić, Teo Ugrina, Branko Stanišić, Ladislav Vrsalović INVESTIGATION OF MECHANICAL PROPERTIES OF HIGH STRENGTH SHIPBUILDING STEEL LR-AH36 AT DIFFERENT TEMPERATURES			
18:45 – 19:00	Patrik Tarandek, Zdenka Zovko Brodarac, Franjo Kozina IMPACT OF MODIFICATION AND WALL THICKNESS ON THE PROPERTIES OF AlSi12 ALLOY			
19:00 – 19:15	Valentina Županić, Sanja Šolić INFLUENCE OF HEAT TREATMENT ON THE PROPERTIES OF MARAGING STEEL PRODUCED BY ADDITIVE SELECTIVE LASER MELTING PROCESS			



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SPONSORSHIP CATEGORY	COMPANY	COMPANY LOGO
CO-ORGANIZER	ELKEM ASA, Oslo (NO)	Elkem
GOLDEN	COMET d.o.o., Novi Marof (SI)	C COMET
SPONSOR	LABTIM ADRIA Ltd, Sesvete (HR)	Labtim
	Kontroltest International d.o.o., Zagreb (HR)	√ trokuttest _{grap}
	EDC d.o.o., Zagreb (HR)	
	IDEF d.o.o., Zagreb (HR)	ndustrijska defekloskopija
BRONZE SPONSOR	Tvornica gline Kutina d.o.o., Kutina (HR)	PETROKEMIJA KUTINA
	MECAS ESI s.r.o., Plzen (CZ) & TC LIVARSTVO Ltd, Ljubljana (SI), Livarna Titan d.o.o., Kamnik (SI)	ProCAST LIVARNA LIV
	LTH Metalni lijev d.o.o., Benkovac (HR)	LTH Metal Cast



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SPONSORSHIP CATEGORY	COMPANY
	IRT 3000
MEDIA COVER	Foundry Planet
	Foundry Lexicon
SUPPORTING	Slovenian Foundry Association
ASSOCIATION AND COMPANIES	Croatian Foundry Association



Position of buildings related to 19 IFC events on Campus **Split**



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III Faculty building (congress venue)

Information on taxi transport in Split

Cammeo taxi Split:

https://cammeo.hr/en/cities/split

tel: +38521313313 Uber taxi Split:

https://www.uber.com/global/en/cities/split/

Eko Taxi Split:

URL: https://ekotaxi.hr/gradovi/split

tel: <u>021 223 223</u> **Žuti taxi Split:**

tel: +385 21 208 208

Auto taxi Split:

http://www.radio-taxi-

split.hr/?gclid=CjwKCAjw47eFBhA9EiwAy8kzNCQwdCCGIB8kHIZ2weWsqJhs3mkX

9w6J UIPGvJrAa2vxOyLLdtKUxoCbq8QAvD BwE

tel: +38521473737

Taxi transfer services:

https://www.taxi-transfers-

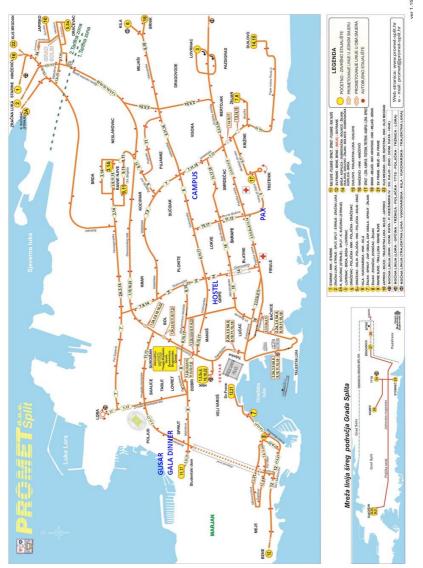
services.com/?gclid=CjwKCAjw47eFBhA9EiwAy8kzNGFEP-

iHBo15IHA3I7kTJPS719HZigDu6SeQWVrzSe1OMWJ4FgChYhoCV-cQAvD BwE

Conference

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City bus lines



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