

111.1.3. Consignment	The information on a commodity lot.	ConsignmentType	Aggregate type. The information on a commodity lot.	[1]
1 CustomsreleaseDateTime	Data and time release of goods	DataTimeCusttype	DataTime. Date and time in the format YYYY-MM-DDThh:mm:ss. In accordance with the standard ISO 8601.	
2 BorderTransportMeans IdentificationText	The information about transport means of moving the border The vehicle identifier.	BorderTransportMeansType TransportMeansIDType	Aggregate type. The information about transport means of moving the border The identifier. Vehicle number. To 35 symbols. Text.	[0..1]
JourneyIdentifier	Number for transportation identification (number of a trip/number of flight).	CRType	Number for transportation identification (number of a trip/number of flight).	[0..1]
3 TransportContractDocument	Transport documents.	TransportContractDocumentType	Aggregate type. Transport documents	[0..1]
ReferenceIdentifier	Transport Document number.	TransportDocumentIdentifierType	The identifier of the transport document. To 35 symbols.	[1]
4 LoadingLocation CodeIdentifier	The name of a place of loading of the goods. Code of customs of registration from Republic of Kazakhstan Party/code of a place of loading from the Chinese Party.	LoadingLocationType LoadingPlaceCodeType	Aggregate type. The information on customs of registration from the Republic of Kazakhstan side and a place of loading of the goods from the Chinese Party. Code of a place of loading of the goods. To 11 symbols.	[1]
5 TransportEquipment	The information on the container.	TransportEquipmentType	Aggregate type. The information on the containers used for transportation of the goods.	[1..n]
SealIdentifier	Seal number.	SealsIdentifierType	Seal number. To 35 symbols.	[0..n]
EquipmentIdentification IdentificationIdentifier	The information on the special equipment used for transportation. Container number.	EquipmentIdentificationType EquipmentIdentityType	Aggregate type. The information on containers. The identifier. Number of the Ry car, trailer number, container number. From 1 to 17 symbols.	[0..1] [1]
111.1.4 ExitCustomsOffice 1. CodeIdentifier	Code of customs authority of departure. Customs code.	ExitCustomsOfficeType CustomsCodeType	Aggregate type. A code of customs authority of export. Customs code. To 11 symbols. alphanumeric-numerical.	[0..1] [1]
111.1.5 CustomsGoodsItem 2. Commodity	The information on the goods.	CustomsGoodsItemType CommodityType	Aggregate type. The information on the goods Aggregate type. Goods characteristics.	[1..n] [1]

	TariffClassifierIdentifier	Goods code according to commodity nomenclature.	GoodsNomenclatureCodeType	Goods code on CN. From 6 to 12 symbols. Numerical.	[1]
	CargoDescriptionText	The text description of the goods.	Text256Type	Text given in the length to 256 symbols.	[1]
111.1.6	Consignor	The information on the consignor of the goods.	ConsignorType		[0..1]
3.	Name	The name of the consignor	NameType	The name of the consignor. To 70 symbols. Text.	[1]
	Exporter	Information about the exporter of the goods.	ExporterType	Aggregate type. The information on the exporter of the goods.	[1]
121.1.1	Name	The company-exporter name	NameType	The name of the exporter. To 70 symbols. Text.	[1]
	DeclarationPackaging	Quantity of places	GoodsPackagingType	Aggregate type. Quantity of places.	[0..1]
131.1.1	QuantityQuantity	Quantity of units in pieces.	PackagesQuantityType	Quantity of cargo packages. From 1 inclusive. To 8 figures	[1]

4.5. Result of notification processing

4.5.1. UML- diagram

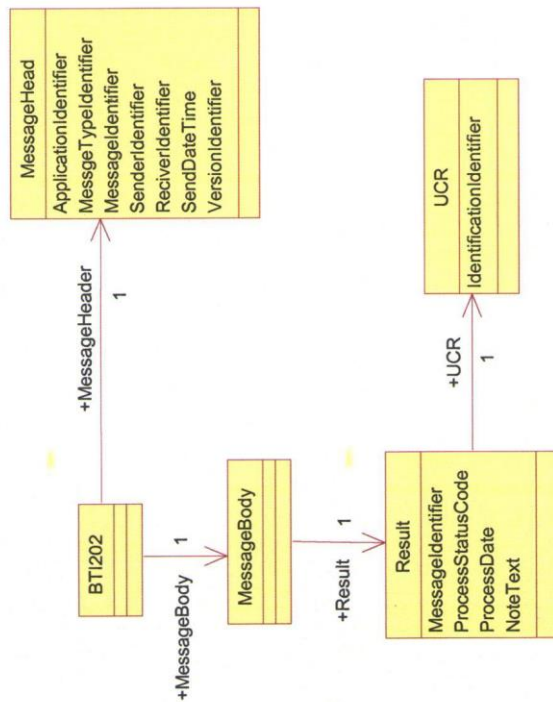


Fig. 10. Table BTI202

4.5.2. Structure of result notification processing (BTI202)

Element	Element's description	Type	Type's description	PI.
BTI202	Root element ED "Result of Message processings BTI101."	BTI202Type	Aggregate type. ED Details " Result of message processing. BTI101."	[1]
1 MessageHeader	Message Header.	MessageHeaderType	Aggregate type. Message Header	[1]
1.1.1 ApplicationIdentifier	Application Identifier	SoftVersion	Soft Version	[1]
1.1.1 MessageIdentifier	Message Type Identifier.	MessageKind	Message kind	[1]

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Element	Element's description	Type	Type's description	Pl.
MessageIdentifier	Unique document	DocumentIDType	Identifier. Text line. Up to 36 symbols.	[1]
SenderIdentifier	SenderIdentifier	ParticipantIdentifier	Message sender/addressee identifier.	[1]
ReceiverIdentifier	ReceiverIdentifier.	ParticipantIdentifier	Message sender/addressee identifier	[1]
SendDateTime	SendDateTime	DateTimeCustType	Date and time in a format YYYY-MM-DDThh:mm:ss. ISO 8601 Standard.	[1]
VersionIdentifier	Version Number.	SoftVersion	Software version	[1]
MessageBody	Body of the message	MessageBodyType	Aggregate type. Body of the message	[1]
Result	Result of message processing BT1101.	ResultType	Aggregate type. Result of message processing BT1101.	[1]
MessageIdentifier	Message Identifier	DocumentIDType	Identifier. Text line. Up to 36 symbols.	[1]
ProcessStatusCode	Process Status Code	StatusCodeType	Status code message processing.	[1]
ProcessDate	Time when message BT1101 has been processed.	DateTimeCustType	Date and time in a format YYYY-MM-DDThh:mm:ss. ISO 8601 Standard.	[1]
NoteText	Note text	Text256Type	Text data 256 symbols.	[0..1]
2.1.5 UCR	The identifier of commodity party.	UCRType	Aggregate type. Unique number of transportation (UCR).	[0..1]
2.1.6	IdentificationIdentifier	UCRType	Unique number of transportation (UCR). Contains to 35 alphanumeric symbols.	[1]

4.6. Operability system request

4.6.1. UML-diagram

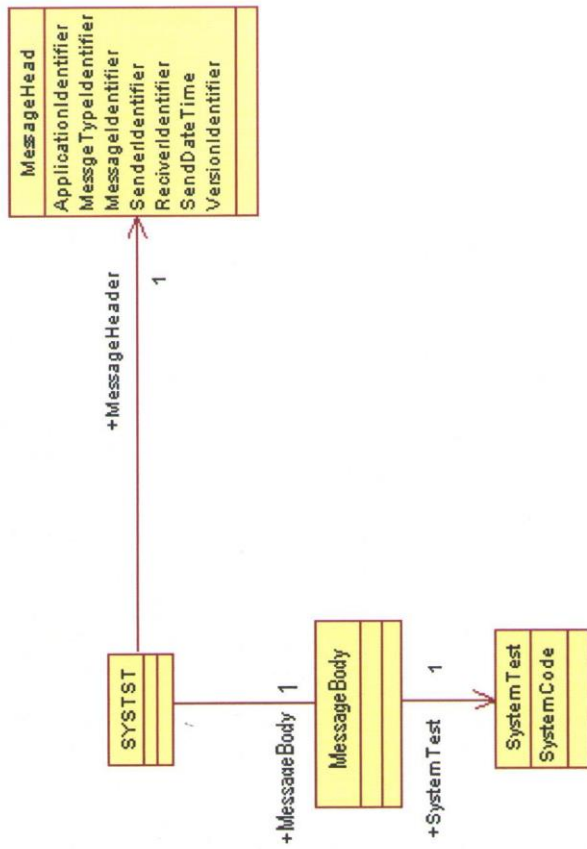


Fig 7. Block diagram of SYSTST

4.6.2. Structure of operability system request

Element	Element's description	Type	Type's description	PI.
SYSTST	Root Element ED ""	SYSTSTType	Aggregate type. ED details""	[1]

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Element		Element's description	Type	Type's description	Pl.
1	MessageHeader	Message Header.	MessageHeadType	Aggregate type. Message Header.	[1]
	1.1.1. ApplicationIdentifier	Application system Identifier.	SoftVersion	Software Version	[1]
	MessageIdentifier	Message Type identifier	MessageKind	MessageKind	[1]
	MessageIdentifier	Unique message identifier.	DocumentIDType	Identifier textline. Up to 36 symbols.	[1]
	SenderIdentifier	Message sender identifier	ParticipantIdentifier	Message sender/addressee identifier	[1]
	ReceiverIdentifier	Receiver identifier	ParticipantIdentifier	Message sender/addressee identifier.	[1]
	SendDateTime	Sending Date time	DateTimeCustType	DateTime. Date and time in a format YYYY-MM-DDThh:mm:ss. ISO 8601 Standard. With instructions of a time zone in format HH:MM	[1]
	VersionIdentifier	Version number.	SoftVersion	Software Version	[1]
2	MessageBody	Body of the message	MessageBodyType	Aggregate type. Message body	[1]
	SystemTest	Request for information interaction functionality of the System.	SystemTestType	Aggregate type. Request for Information interaction functionality of the System.	[1]
	SystemCode	System code	Text35Type	Text data 35 symbols.	[1]

4.7. Type description

Title	Description	Parental Type	Limit
CRNTType	Transportation identification number (journey/flight number).	xsd:token	Min. length: 1 Max. length: 17
CustomsCodeType	Customs body code. Up to 11 symbols. Alphanumeric code	CategoryCust:CodeCategoriesCust	Min. length: 1 Max. length: 11
CustomsRemarkType	Customs code. Up to 11 symbols. Alphanumeric code.	CategoryCust:CodeCategoriesCust	Length: 11

Title	Description	Parental Type	Limit
DateCustType	Date. Date in a format YYYY-MM-DD. DD With instructions of a time zone in format HH:MMISO 8601 Standard.	CategoryCust:DateCategoriesCust	
DateTimeCustType	DateTime. Date and time in a format YYYY-MM-DDThh:mm:ss. With instructions of a time zone in format HH:MM ISO 8601 Standard.	CategoryCust:DateTimeCategoriesCust	
DocumentIDType	Identifier. Text line. Up to 36 symbols.	xsd:token	length: 36
NameType	The name of the exporter. Up to 70 symbols. Text.	CategoryCust:TextCategoriesCust	Min. Length: 1 Max. Length: 70
GoodsNomenclatureCodeType	Code of the good in compliance with Commodity Nomenclature. Up to 12 symbols. Digital.	CategoryCust:CodeCategoriesCust	Min. Length: 6 Max. Length: 12
IndicatorType	Indicator. List of mutually exclusive bull meanings true/false, switch on/ switch off, ad so on.	CategoryCust:IndicatorCategoriesCust	
LoadingPlaceCodeType	Code of place of loading the goods. Up to 11 symbols.	xsd:token	Min. Length: 1 Max. Length: 11
OPMode	Operation sign (primary PI, change PI, removal PI)	xsd:string	Possible values: A, M, D
MessageKind	Type of message	xsd:token	Length: 6
PackagesQuantityType	Number of cargo places. From 0 exclusive. Up to 8 digits.	CategoryCust:IntegerCategoriesCust	Total digits: 8 Not less: 0
ParticipantIdentifier	Identifier of sender/receiver of the message.	xsd:token	Min.Length: 1 Max. Length: 18
SealsIdentifierType	Number of the seal. Up to 35 symbols.	CategoryCust:TextCategoriesCust	Min. Length: 1 Max. Length: 35
SoftVersion	Software Version.	xsd:token	Length: 3
StatusCodeType	Code of the status of message processing.	xsd:token	Min. Length: 1 Max. Length: 5
Text256Type	Textual data in length up to 256 symbols.	CategoryCust:TextCategoriesCust	Min. Length: 1 Max. Length: 256
Text35Type	Textual data in length up to 35 symbols	CategoryCust:TextCategoriesCust	Min. Length: 1 Max. Length: 35
TimeCustType	Time. Time in format hh:mm:ss. In compliance with standard ISO 8601.	CategoryCust:TimeCategoriesCust	
TransportDocumentIdentifierType	Identifier of the transport document. Up to 35 symbols.	xsd:token	Min. Length: 1 Max. Length: 35

Title	Description	Parental Type	Limit
TransportMeansIDType	Identifier. Number of mean of transport. Up to 35 symbols. Textual.	CategoryCust: IdentifierCategories Cust	Min. Length: 1 Max. Length: 35
UCRType	Unique consignment reference number (UCR). Contents up to 35 letter-digital symbols.	xsd: token	Min. Length: 1 Max. Length: 35

5. ELECTRONIC DOCUMENTS VERIFICATION PROCEDURE

5.1. Classification of processing errors of electronic document

In order to provide the interaction of the annexes, the field <ProcessStatusCode> of the electronic document BTI202 is used, in which the result of the processing (return code) of the received ED is transferred. The established diapasons of the return codes are specified in Tab. 8.

Tab. 8. Diapasons of the return codes

Diapason of meaning	Category of the message
80000	Successfully completion of ED processing
11000-19999	Error in the course of ED structural control
20000-29999	Error in the course of ED logical control
10000	Identifier ED (MessageIdentifier) is not unique
40000	Duplication ED
50000	Information change/cancellation is impossible

The established accurate meanings of return codes for definite errors of ED processing are specified in the Table 8.

5.1.1. Check of uniqueness ED

At reception ED Importer IGC by all means carries out by all means check of uniqueness of the transferred information.

The algorithm of check of uniqueness ED is presented on Fig.11 also includes following steps:

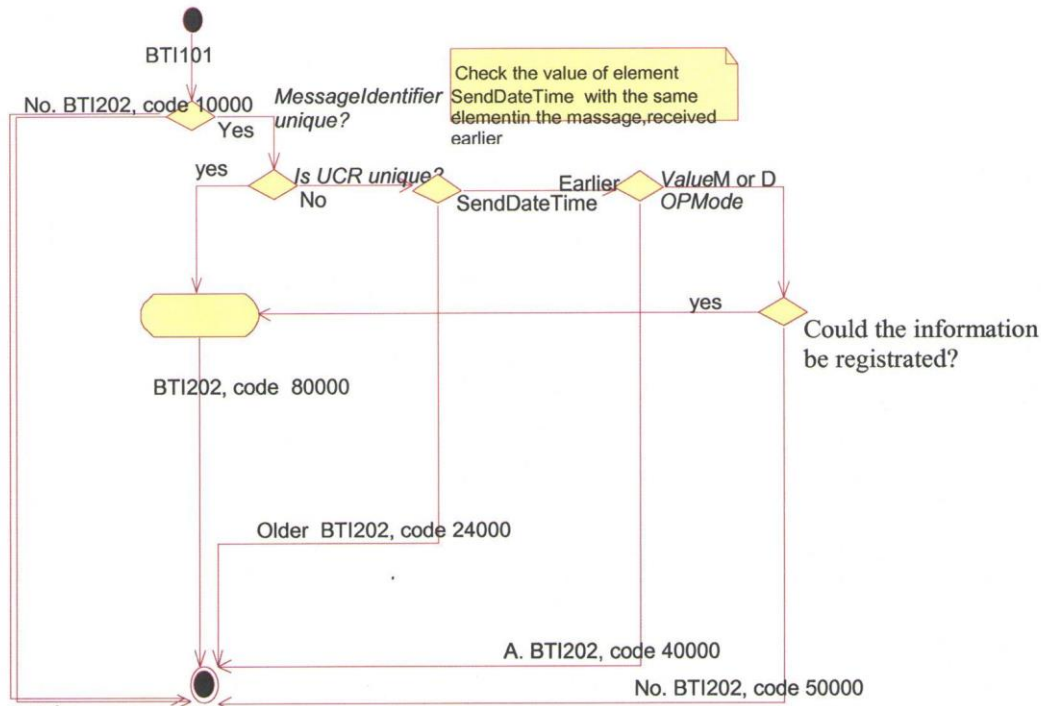
1. Check of uniqueness of identifier ED (MessageIdentifier):
 - If identifier ED is unique transition to a step 2 is carried out;
 - If identifier ED is not unique to the sender message BTI202 with a code 10000 goes.
2. Check of uniqueness of number of a cargo lot (UCR):
 - If number of a cargo lot is unique the document is processed by system of the addressee;
 - If number of a cargo lot is not unique transition to a step 3 is carried out.
3. Check of the value specified in element SendDateTime:
 - If date and time specified in this element is older, than date and time specified in the same element in the message, received earlier to the sender message BTI202 with a code 24000 goes;

If date and time specified in this element is the latest, than date and time specified in the same element in the message, received earlier transition to a step 4 is carried out.

4. Check of value of a sign of operation (OPMode):
 - If value OPMode is equal A to the sender message BTI202 with a code 40000 goes;
 - If value OPMode is equal M or D transition to a step 4 is carried out.
 5. Check of possibility of registration of changes/cancellations of data:
-

- If registration of changes/cancellations of data is possible, the document is processed by system of the addressee;

- If registration of changes/cancellations of data is impossible, to the sender message BTI202 with a code 50000 goes.



5.2. Values of errors codes of electronic document processing

In Tab. 9 the established exact values of codes of return for certain errors of processing of the electronic document are resulted Tab. 8. Accurate meanings of the return codes.

Return codes	Description
80000	Successfully ED processing
10000	Identifier ED (MessageIdentifier) is not unique
40000	Duplication of ED
50000	Information change/cancellation is impossible
Error in the course of ED structural control	

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12000	E-document didn't pass the control in regard to the compliance with the XML scheme
Error in the course of ED logical control	
21000	Code of the good is not found in the manual of the codes of the goods
22000	Departure's Customs code is not found in the customs codes' guide
23000	Good's loading place code is not found in the good's loading place codes' guide
24000	The date specified in element SendDateTime later on, than the date specified in the same element in the message, received earlier
25000	Incorrect format of element SendDateTime.
26000	Incorrect format of element ExitDate.
27000	Incorrect format of element CustomsReleaseDateTime.
28000	Incorrect format of element ProcessDate
System Errors	
30000	Automated system is functioning

6. STANDARDS

6.1 XML

- Extensible Markup Language (XML) 1.0 (Third Edition) published in Internet: <http://www.w3.org/TR/REC-xml>.
- XML Schema Part 1: Structures и XML Schema Part 2: Datatypes, published in Internet <http://www.w3.org/TR/xmlschema-1/> и <http://www.w3.org/TR/xmlschema-2/>.

6.2 Coding

UTF-8 coding is used.

7. TRANSPORT SUBSYSTEM CONFIGURATION DESCRIPTION

7.1. General information

The Information exchange of goods and vehicles moved on the Kazakhstan -Chinese border between IGC of the Customs Control Committee of the Ministry of Finance of the Republic of Kazakhstan and CCIC, is carried out by asynchronous way with use IBM WebSphere MQ 6.0..

Basic elements IBM WebSphere MQ 6.0 are:

- Managers of turns - the server components operating turns and messages processing;
- Turns in which applied and technological messages are kept;
- Message transfer channels which are connected by turns managers;
- Messages, witch application programs are sending to each other.

IGC of the Customs Control Committee of the Ministry of Finance of the Republic of Kazakhstan and CCIC appendices application information is proceed in the messages' form in incoming messages turn located in turns manager in IGC of the Customs Control Committee of the Ministry of Finance of the Republic of Kazakhstan. Next messages are taken from turn and processed by the appendices which are carrying out the applied logic.

To improve information interaction reliability messages IBM WebSphere MQF are recommended for use. Please, inform about the Confirmation of Arrival and Confirmation of Delivery, Expiry, Exception came from Information Collecting Center of China.

Following local turns are defined for cooperation with CCIC:

- Turn of incoming messages from CCIC. In this turn documents (BTI101) notifications are come from the Chinese Party.
- Turn of incoming messages for CCIC. In this turn documents (BTI101) notifications are put from IGC of the Customs Control Committee of the Ministry of Finance of the Republic of Kazakhstan.

7.2 Transport environment parametres

Transport environment parametres used during information exchange about the goods and vehicles moved across the border of Republic of Kazakhstan and the People Republic of China are listed in Tab. 10.

Tab. 10. Transport environment parametres

Component MQ	Meaning	
	Kazakhstan Party	Chinese Party
Turns managers		
Turns managers	KZ.FTS.EXT	QMZS_HLWRU
Local turns		
Turn of incoming messages	CH.FROM	KZ.LQ

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Component MQ	Meaning	
	Kazakhstan Party	Chinese Party
Deleted turns		
Turn of outcoming messages	CH.TO	KZ.RQ
Chanals		
Server	KZ.GNIVC/CH.GTU	
Requester	CH.GTU/KZ.GNIVC	

8. SAFETY

For information internetworking between the Parties electronic documents exchange must be made by using the protocol IPSec (RFCs 2401-2412) in tunneling regime. The protocol ISAKMP must be used for description of methods of core information exchange (IKE RPC 2104). Shared key must be used as a method of authenticating the secured interaction partners irrespective of other organizations and services. One-time pad is used for concerted receipt of shared key.

Exchange of one-time pads is made by other methods of private connection.

For organizing the secured internetworking parties parameters listed in the Tab. 11 should be used.

Tab.11 Parameters of secured internetworking

Parameter	Kazakhstan Party	Chinese Party
<i>Public IP-address of the IPSec gateway of the secured interaction partner</i>		
<i>Private IP-address of the secured partner network</i>		
IPSec mode	Tunneling	Tunneling
Authentication method	Preshared key +Public IP-address	Preshared key+Public IP-address
Cryptographic transformation algorithm for authentication (transform -set)	ESP SHA-1	ESP SHA-1
Cryptographic transformation algorithm for data encoding	AES-128	AES-128
Cryptographic transformation algorithm for IKE	Diffie-Hellman Group 2 SHA-1	Diffie-Hellman Group 2 SHA-1
Security association lifetime (seconds)	86400(24 hours)	86400(24 hours)
Security association traffic volume in Kilo byte	4608000	4608000

9. USAGE OF CLASSIFIERS

Within the information exchange process between the Parties the following classifiers are been used:

- Republic of Kazakhstan Customs Bodies Code Guide;
- Chinese Customs Bodies Code Guide;
- Chinese Code Guides on Loading Places of Goods;
- HS Tariff Code.

10. UCR FORMATION RULES

Unique consignment reference number is formed in accordance the WCO Recommendation of June 26, 2004 "Concerning a unique consignment reference (UCR) for customs purposes". UCR number contains 35 symbols. The structure of the number is presented in the table below.

Tab. 2. UCR Structure

Field	Contents	Field type	Filling Example
1	Exporter country code	Symbol code of the country (alpha-2 under international standard ISO 3166-1)	KZ
2	Customs declaration number	Numerical, 18-23 signs	10510040/290409/0014478

Field one is filled as shown above.

Field 2 is completed according to the rule below:

- in messages transferred by the Chinese Party:

NNNNYYYYZXXXXXXXXX,

NNNN – is the code of the customs body who issued the declaration;

YYYY – declaration registration year;

Z – import-export sign;

XXXXXXXXXX – declaration serial number.

- in messages transferred by Republic of Kazakhstan Party:

NNNNNNNN/DDMMYY/XXXXXXXX,

NNNNNNNN – is the code of the customs number who issued the declaration;

DDMMYY – 2 symbols correspondingly for the day, the month and the year in the issued declaration;

XXXXXXXX – declaration serial number.

11. ORDER OF TESTING FOR INFORMATION SYSTEMS OF THE PARTIES

11.1 General information

The following sections are dedicated to order of testing for transportation system, used for transfer of e-messages between the Parties, as well as for info systems used by Parties for procession of messages.

For initial procedure of testing (at initial connection of information systems of the Parties) a working group, including representatives of both Parties, is created. A report is made upon the outcomes of the testing.

When operating the information systems of the Parties, the tests can be carried out routinely, without drawing the reports on the results of testing.

11.2 Testing of transport system

To analyze the state of message delivery system, used by the Parties within the information exchange, a certain set of tests is used. Testing is carried out by test groups from personnel of both Parties, without the aid of automatic means. Such tests include consecutive sending of 10 (ten) test messages.

The test is successfully passed if within 10 minutes from the adjacent Party, for each of the sent messages, delivery notices at transport level are received (see. section 7.1).

11.3 Testing of messages processing systems

To analyze the state of message processing system each Party uses a certain set of tests. During testing the correctness of processing valid messages as well as of those generated with errors is checked. The description of corresponding tests is given in the subsequent sections.

11.4 Valid messages Processing

During such a test valid messages are consecutively sent to the adjacent Party BTI101 (notice on intention to import goods).

The test is considered successfully passed in case corresponding messages BT1202 with return codes equal to 80 000, from the adjacent Party, have been received.

11.5 Processing of messages with errors

During such a test messages generated with errors are consecutively sent to the adjacent Party. For each error code the corresponding test message is formed.

The test is considered successfully passed in case the adjacent Party messages BTI202 with return codes corresponding to values from table 8 are received.

SUPPLEMENT A EXAMPLES OF TEST MESSAGES

Examples of messages used to test the efficiency of data processing systems for each Party are given in this section.

1. Valid messages

Message BTI101 (notice on intention to import goods):

2. Messages with errors

Test examples

Done in Beijing, on March 28th, 2011.

For the Customs Control Committee
The Ministry of Finance
The Republic of Kazakhstan



For the General Administration of Customs
The People's Republic of China
(GACC)

